

Watts Up

Charge up on static electricity. Make indoor lightning and conduct hair-raising experiments with an electro-static generator. Use your Static Stick on electrons at home.

SUMMARY:

In this class, children discover the world of static electricity. They will see sparks fly from an electrostatic machine, the Van de Graaff generator. Children rub feathers against their heads to create a static field. A sparking light demonstration shows the potential electrical power surrounding the generator. The instructor also tacks on a wig to the Van de Graaff to generate a brilliant, hair-raising display from the repelling forces of charged atoms!

EDUCATIONAL VALUE:

This class offers children a solid introduction to the properties of electricity and electric charges. Children discover an electric charge's basic properties, learn to distinguish between static electricity and electrical current, and explore the science behind these phenomena. Hands-on activities provide a tactile lesson in charging and discharging objects with static electricity. Children will be able to relate a newfound understanding of lightning and static-electric shocks—that may have previously been confusing or even frightening—to their daily lives. They will learn how to protect themselves from electric shocks and lightning.

TAKE-HOME MESSAGE:

- 1 Static can happen when two objects touch.
- 2 Static happens when electrons move from one object to another.
- 3 Lightning rods protect tall buildings. They move lightning into the ground.

TAKE-HOME PRODUCT:

MS Static Stick

NORTH CAROLINA ESSENTIAL STANDARDS:

- 1.P.1.2 Explain how some forces (pushes and pulls) can be used to make things move without touching them, such as magnets.
- 3.P.3.1 Recognize that energy can be transferred from one object to another by rubbing them against each other.
- 4.P.1.2 Explain how electrically charged objects push or pull on other electrically charged objects and produce motion.

