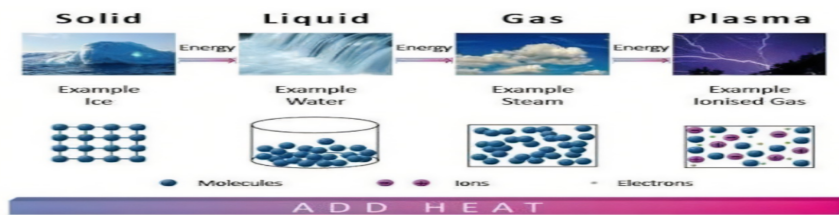


# Plasma



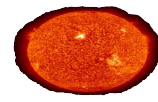
[What Is Plasma | Properties of Matter | Chemistry | FuseSchool - YouTube](#)

**Plasma is** superheated matter – so hot that the electrons are ripped away from the atoms forming **an ionized gas**.

It makes up over 99% of the visible universe.

Plasma is often called “the fourth state of matter,” along with solid, liquid and gas.

Just as a liquid will boil, changing into a gas when energy is added, **heating a gas will form a plasma – a soup of positively charged particles (ions) and negatively charged particles (electrons)**.

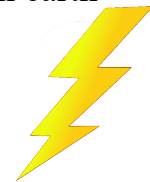
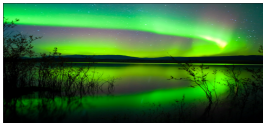


In the night sky, plasma glows in the form of stars, nebulas, and even the auroras that sometimes ripple above the north and south poles.

That branch of lightning that cracks the sky is plasma, so are the neon signs along our city streets. And so is our sun, the star that makes life on earth possible.

Here are 10 examples of forms of [plasma](#):

1. lightning
2. aurorae
3. the excited low-pressure gas inside neon signs and fluorescent lights
4. solar wind
5. welding arcs
6. the Earth's ionosphere
7. stars (including the Sun)
8. the tail of a comet
9. interstellar gas clouds
10. a fireball of a nuclear explosion





Because so much of the universe is made of plasma, its behavior and properties are of intense interest to scientists in many disciplines. Importantly, at the temperatures required for the goal of practical fusion energy, all matter is in the form of plasma.

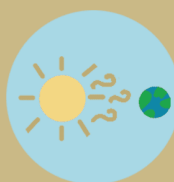
Researchers have used the properties of plasma as a charged gas to confine it with magnetic fields and to heat it to temperatures hotter than the core of the sun. Other researchers pursue plasmas for making computer chips, rocket propulsion, cleaning the environment, destroying biological hazards, healing wounds and other exciting applications.

### Examples of Plasma

Plasma is a state of matter consisting of free charged particles.



Lightning



Solar Wind



Aurora

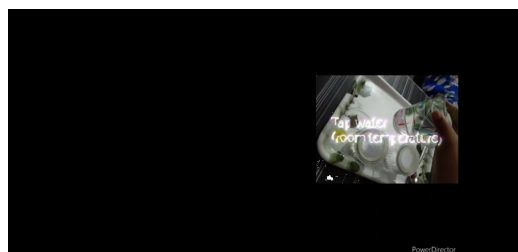


Fluorescent Light



Nuclear Fireball

ThoughtCo.



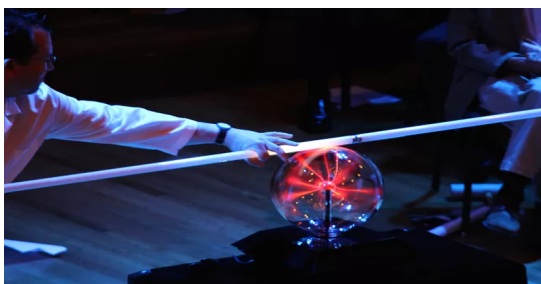
YouTube · 102 views · 2021-05-16 · by Fun N Learn with Shrishti Srivastava

[How It's Made Neon Signs - YouTube](#)



# Plasma Experiment

[Plasma Ball and Fluorescent Light Experiment \(thoughtco.com\)](http://thoughtco.com)



Here are the materials you will need for the experiment:

- > Plasma ball
- > Fluorescent light bulb (any type)

[Plasma Ball and Fluorescent Tube experiment - YouTube](#)

## Steps for the Experiment

Turn on the plasma ball.

Bring the fluorescent bulb close to the plasma ball. As you near the plasma, the bulb will light up.

If you are using a long fluorescent stick, you can control how much of the bulb is lit using your hand. The portion of the bulb close to the plasma ball will remain lit, while the outer portion will stay dark. You can see evanescence or fading of the light as you pull the light further from the plasma ball.

How does glow sticks work?

- ④ -Chemical reactions of 2 liquids

