



Beakman or Jax
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Questions, name & address

Dear Neha and Amit,
First a friendly warning: Fires caused by candles can destroy your home and cause you serious burns. **Never** light a candle unless you have permission from a grown-up in your family.
Think of a candle as a solid oil lamp. The wick is really the thing that moves the fuel to the flame. The fuel is the solid wax, which melts into a liquid and moves up the fibers of the wick into the flame where the wax then turns into a gas – wax-vapor. That *wax-gas* is what's burning.

Jax Place
Jax Place

P.S. from Jax: Candles are usually made from paraffin (PEAR-a-fin), which is made from crude oil. In older times, candles were made mostly from animal fats called tallow (TAL-lo).

Experiment #1

WHAT YOU NEED: Grown-up helper - candle

WHAT TO DO:

Explain to your grown-up that you're going to show how to light a candle without flame ever touching the candle's wick.

A: Ask your grown-up to light a candle. After a moment or two, blow it out.

B: Notice the gray *mist* that lifts up off the wick, but notice it *quicky*.

C: Before the mist disappears, ask your grown-up to bring a lighted match down toward the wick. *Do not* let the match-flame touch the wick.

D: The candle will light.



So What?

So lots! Really. That little demonstration shows us a lot about how a candle works.

When you lighted the candle the first time, the heat from the match melted the wax and it flowed up the fibers of the wick as a liquid.

Then the wax vaporized. It turned into a gas.

A: Wax-gas is what's burning in a candle flame. The heat from the flame turned the wax from a solid into a liquid, and then it turns into a gas, and that's what's burning.

B: When you blew out the candle, that gray mist had wax-gas in it, still drifting up off the wick.

C: When your grown-up lowered the flame toward the wick, the wax-gas caught on fire, and that fire jumped back down the wax-gas to the wick, (**D**) lighting the candle again.