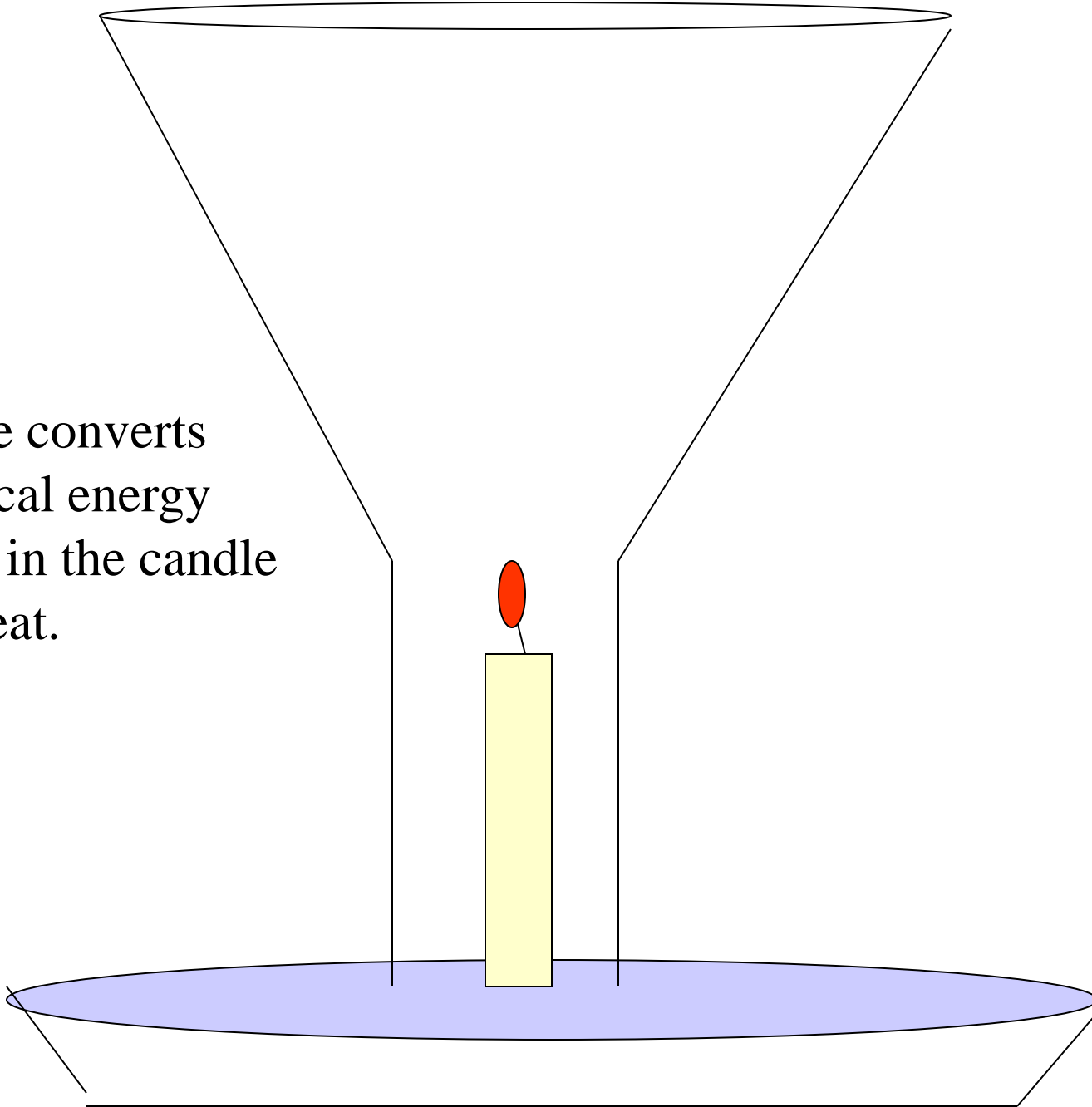
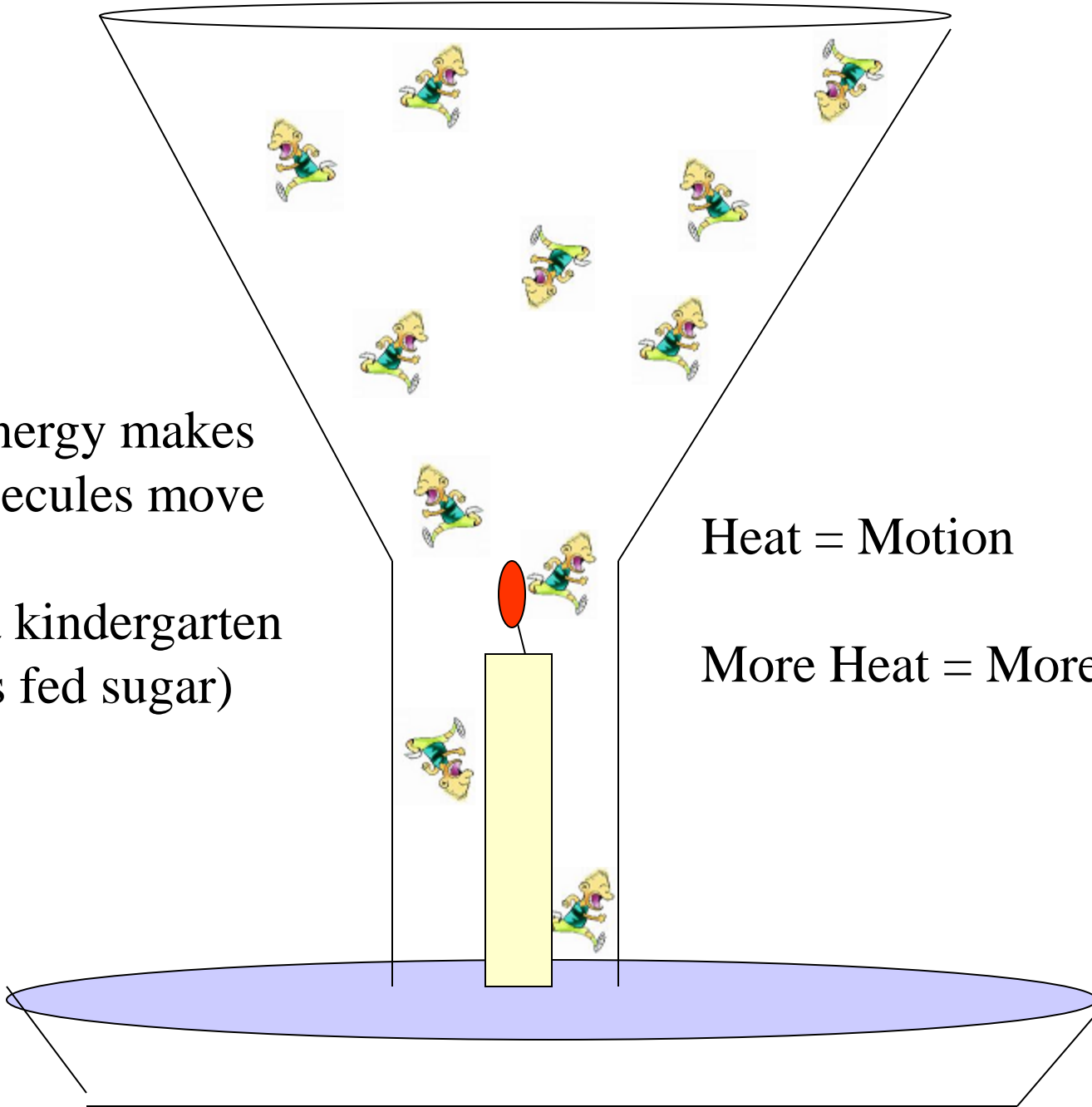


Candle converts
chemical energy
stored in the candle
into heat.

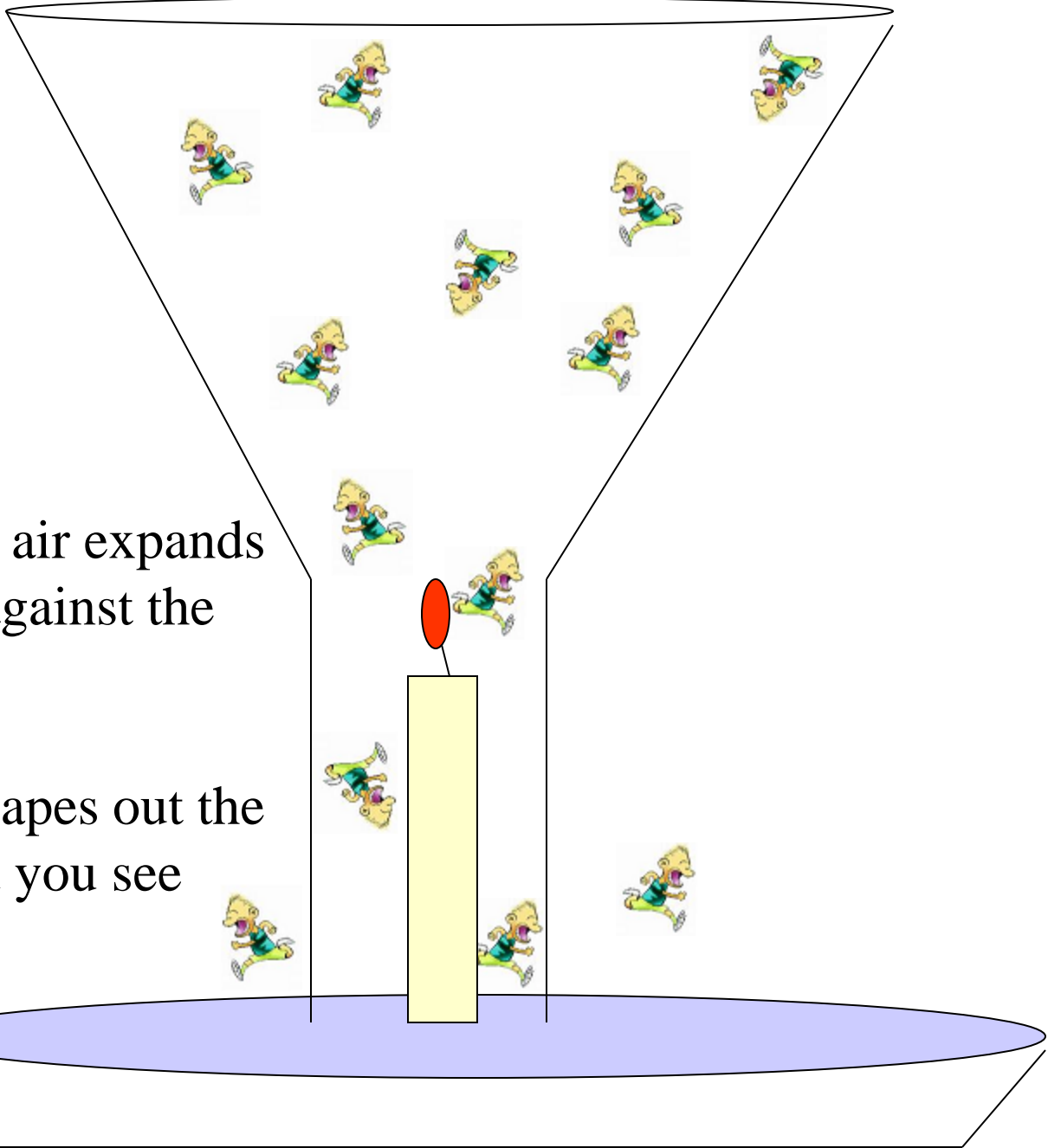


Heat energy makes
air molecules move
faster.
(Like a kindergarten
class fed sugar)



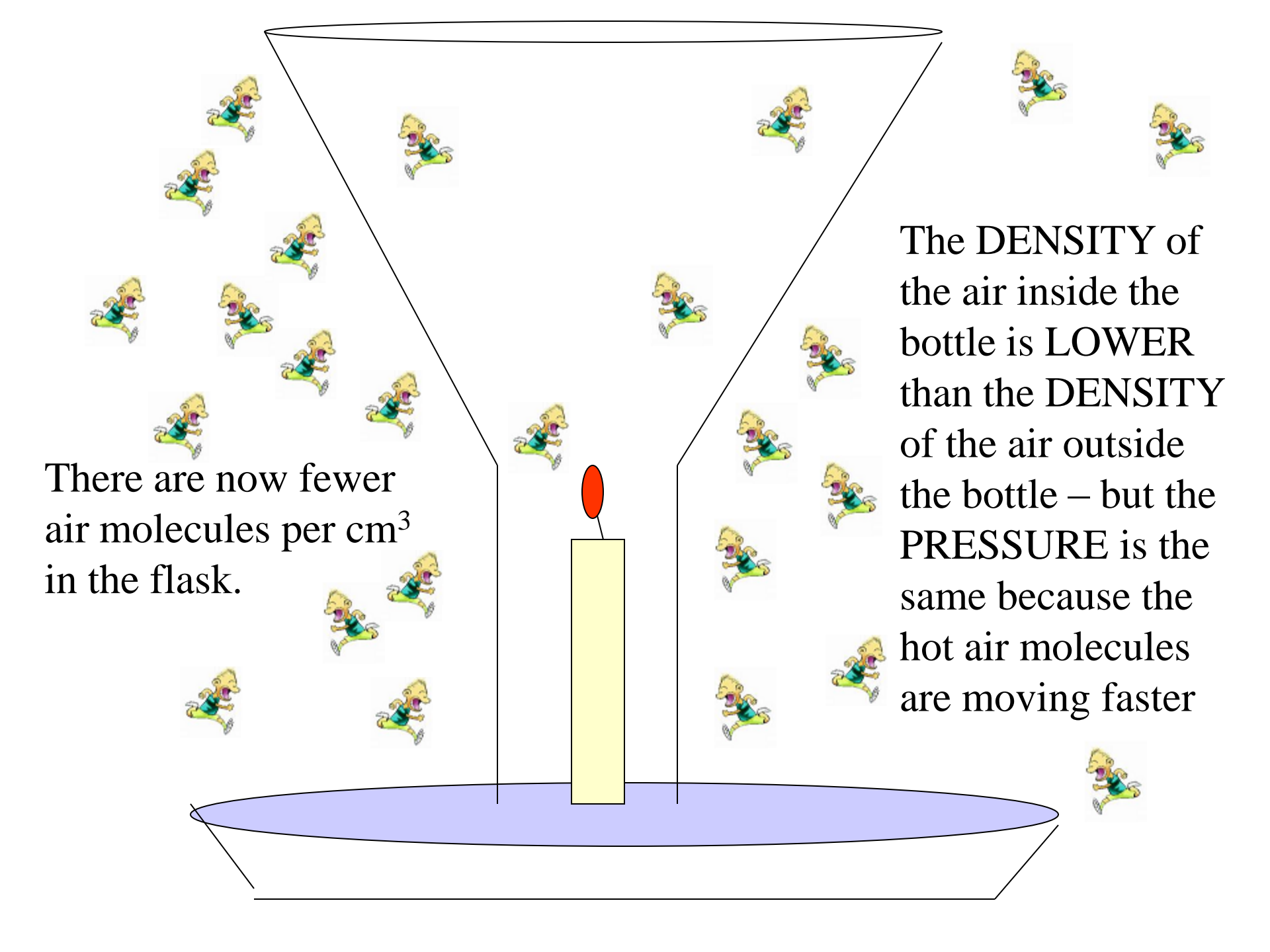
Heat = Motion

More Heat = More Motion



Fast-moving air expands and pushes against the glass.

Some air escapes out the bottom – did you see the bubbles?

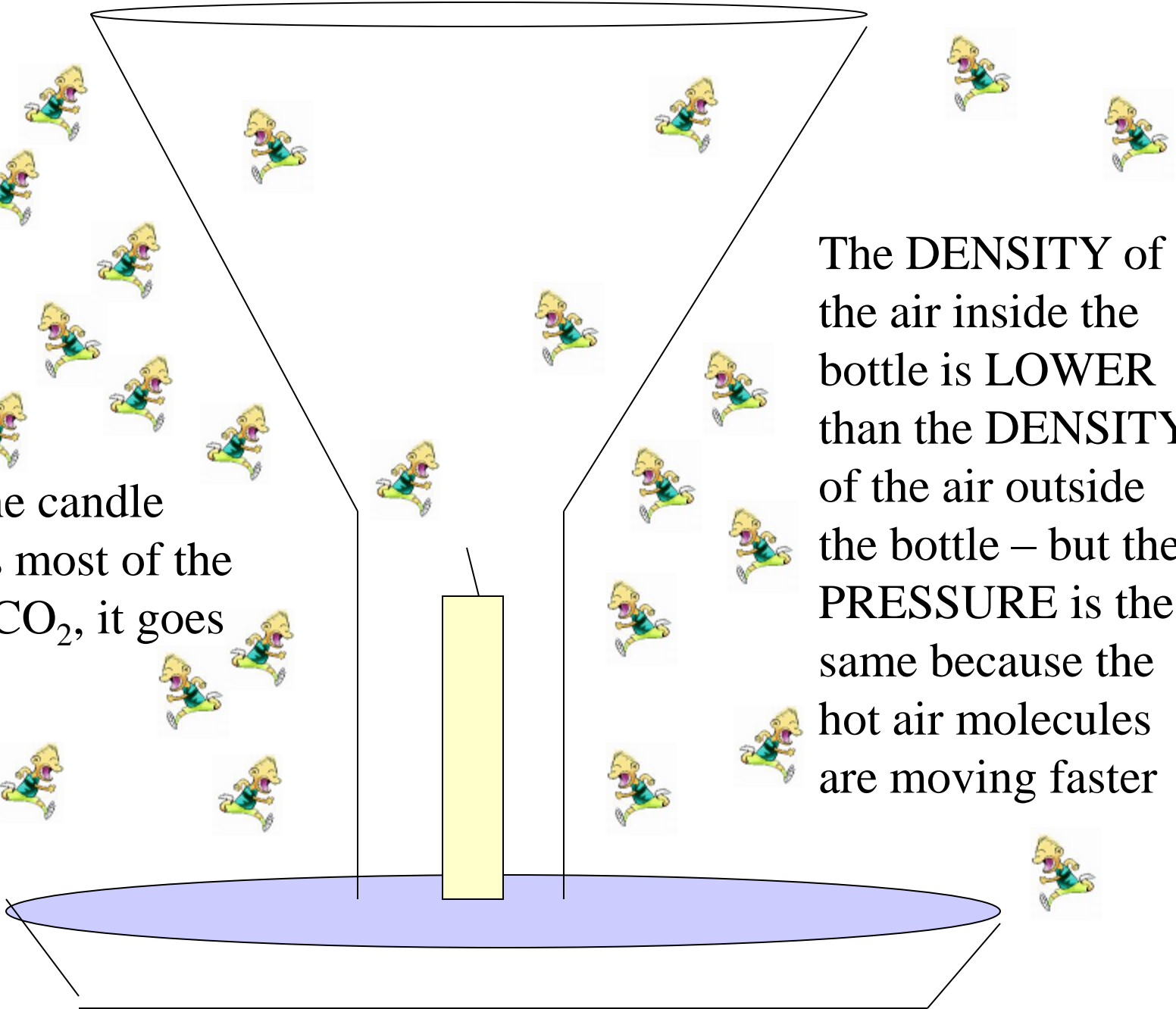


There are now fewer
air molecules per cm^3
in the flask.

The **DENSITY** of
the air inside the
bottle is **LOWER**
than the **DENSITY**
of the air outside
the bottle – but the
PRESSURE is the
same because the
hot air molecules
are moving faster

When the candle converts most of the O_2 into CO_2 , it goes out.

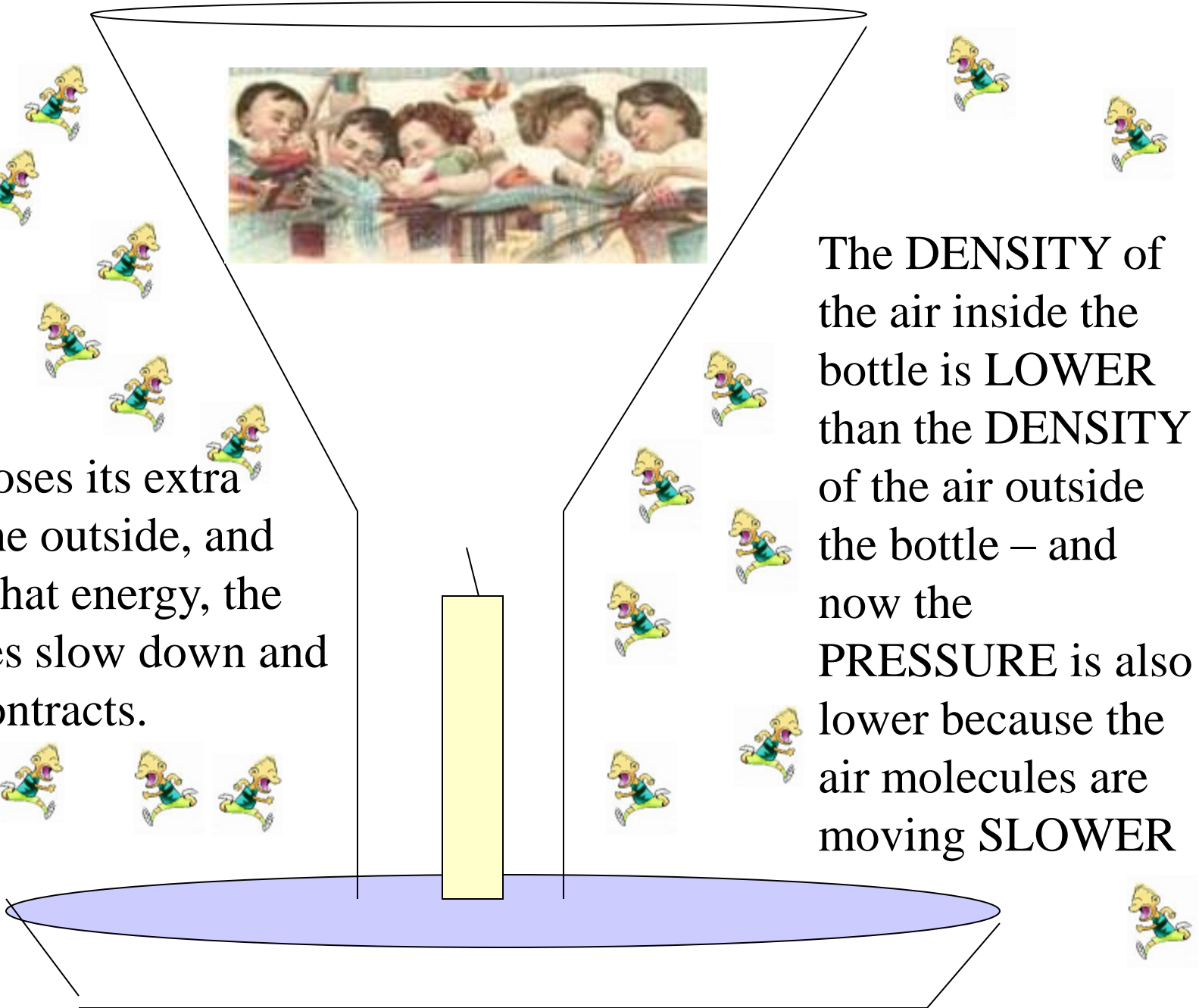
The **DENSITY** of the air inside the bottle is **LOWER** than the **DENSITY** of the air outside the bottle – but the **PRESSURE** is the same because the hot air molecules are moving faster



The air loses its extra heat to the outside, and without that energy, the molecules slow down and the air contracts.



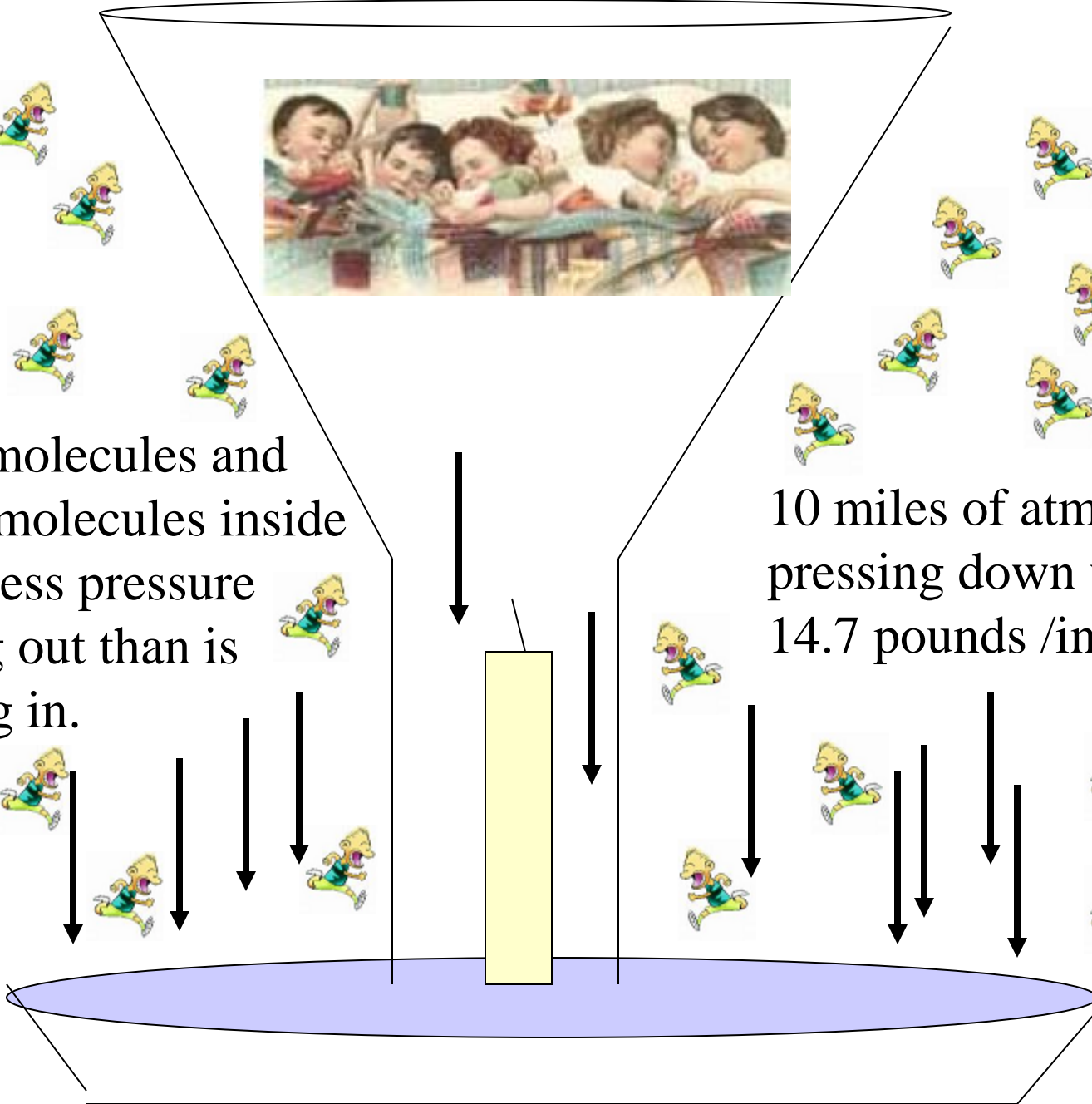
The DENSITY of the air inside the bottle is LOWER than the DENSITY of the air outside the bottle – and now the PRESSURE is also lower because the air molecules are moving SLOWER





Fewer molecules and slower molecules inside means less pressure pushing out than is pressing in.

10 miles of atmosphere pressing down with 14.7 pounds /inch²





Fewer molecules and slower molecules inside means less pressure pushing out than is pressing in.

10 miles of atmosphere pressing down with 14.7 pounds /inch²

