

MAKE A THERMOSCOPE



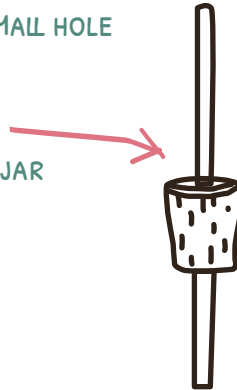
SUPPLIES

- CORK TAP
- RUBBING ALCOHOL
- TRANSPARENT STRAW AT LEAST 25 CM LONG (GLASS WOULD BE BEST)
- GLASS JAR WITH A WIDE BASE

1 FILL THE GLASS JAR HALF WAY UP WITH RUBBING ALCOHOL



2 WITH THE HELP OF AN ADULT CREATE A SMALL HOLE THAT GOES THROUGH THE CORK AND THEN INSERT THE STRAW. INSERT THIS INTO THE TOP OF THE GLASS JAR



3 HOLD THE GLASS JAR WITH YOUR HANDS TO ALLOW THE WARMTH OF YOUR HANDS TO HEAT UP THE RUBBING ALCOHOL



AFTER ONLY A FEW SECONDS THE RUBBING ALCOHOL STARTS TO RISE UP INSIDE OF THE STRAW... ALMOST TO THE TOP!!!

♥ WHAT DO YOU NOTICE?

THIS IS NOT A THERMOMETER BECAUSE IT DOES NOT HAVE A GRADUATED SCALE OF MEASUREMENT. THEREFORE IT CAN ONLY PROVIDE US WITH A QUALITATIVE MEASUREMENT.

WHAT IS GOING ON?

THE RISE IN TEMPERATURE OF ALCOHOL CAUSES THE VOLUME TO INCREASE. IN FACT, ALL MATTER UNDERGOES THERMAL EXPANSION. THEREFORE FARMERS WILL SELL THEIR OLIVE OIL BY THE KILOGRAM INSTEAD OF BY THE LITER DUE TO THIS PHENOMENON OF THERMAL EXPANSION.

ACCORDING TO GALILEO'S STUDENT, VINCENZO VIVIANI, GALILEO INVENTED AN INSTRUMENT TO DETECT VARIATIONS IN TEMPERATURE THAT HE CALLED A THERMOSCOPE IN 1597