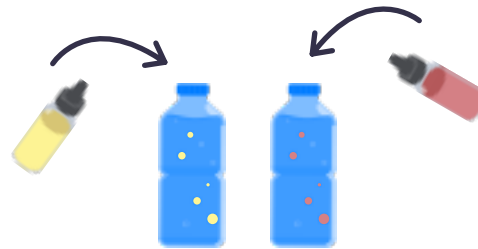


INSTRUCTIONS:

01 Fill up the bottles with the room temperature water.



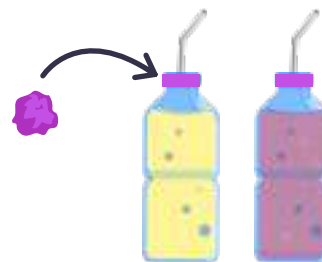
02 Add a couple of drops of food coloring in each bottle.



03 Insert a straw in each bottle.



04 Seal the opening of the bottles with the modeling clay. Make sure that the only remaining opening is the straw's.



MATERIALS:



2 bottles



2 bins



Food coloring



Modeling clay
or reusable
adhesive putty



Hot water



Room temperature
water



2 straws

THERMAL EXPANSION

05 Put one of the bottles in a bin, and fill the bin with room temperature water.



06 Put the second bottle in the other bin, and fill it with very hot water.

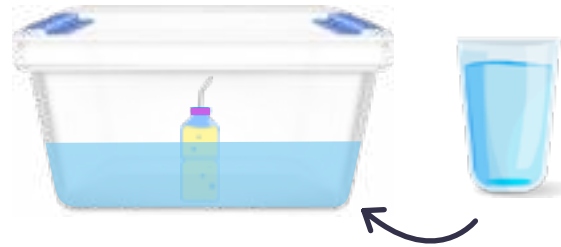


WAIT FOR A LITTLE WHILE, AND LOOK AT THE STRAWS. WHAT DO YOU SEE?

THERMAL EXPANSION

CONCLUSION:

The straw from the bottle placed in the room temperature water filled bin shows no sign of change.



However, in the bin with hot water, you can see water rising in the straw! How is that possible? It is the result of thermal expansion! Heated water takes up more space. As the bottle was full and sealed, expanded water has nowhere to go but up in the straw!

