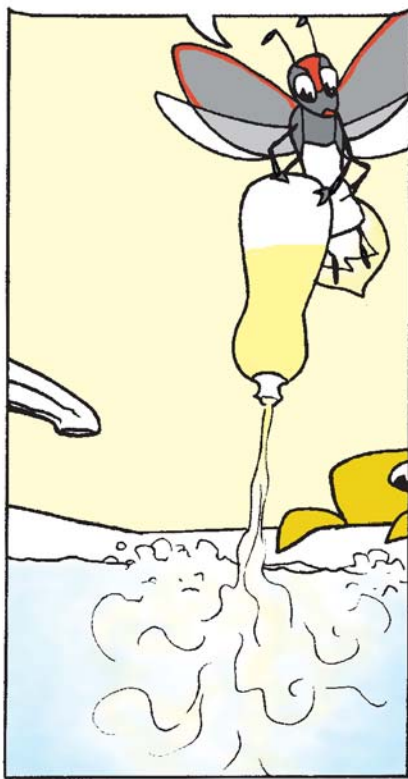


TIME TO CLEAN THE KITCHEN, LIGHTNING!



WHAT A GREAT WAY TO EXPLORE LIQUIDS! A LIQUID IS A SUBSTANCE WHICH FLOWS, SPREADS OUT, OR WILL FALL FROM YOUR HAND IF YOU TRY TO HOLD IT. LIQUIDS TAKE THE SHAPE OF THE CONTAINER THEY ARE IN.

MATERIALS REACT DIFFERENTLY WHEN MIXED WITH WATER. WATER IS A LIQUID AND SO IS THIS DETERGENT. THIS DETERGENT MIXES WITH THE WATER TO CREATE SUDS THAT HELP US CLEAN OUR DISHES.



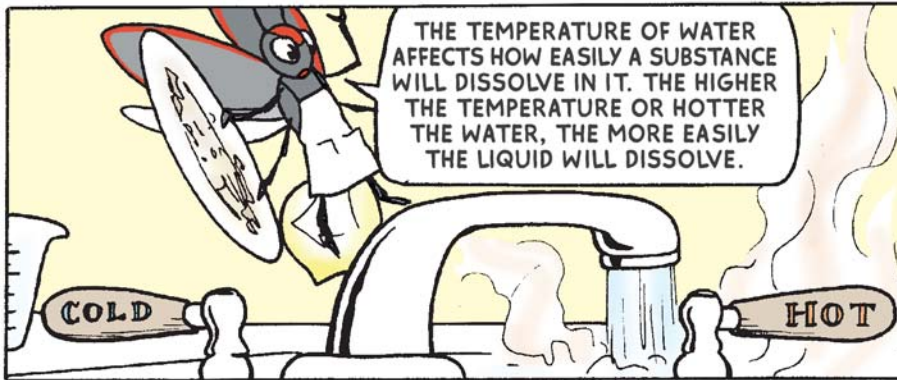
WHILE SOME LIQUIDS MIX WITH WATER, OTHERS LIKE THIS VEGETABLE OIL WILL NOT MIX WITH WATER.



SEE HOW IT SEPARATES FROM THE WATER EVEN AFTER SHAKING IT?



THE TEMPERATURE OF WATER AFFECTS HOW EASILY A SUBSTANCE WILL DISSOLVE IN IT. THE HIGHER THE TEMPERATURE OR HOTTER THE WATER, THE MORE EASILY THE LIQUID WILL DISSOLVE.

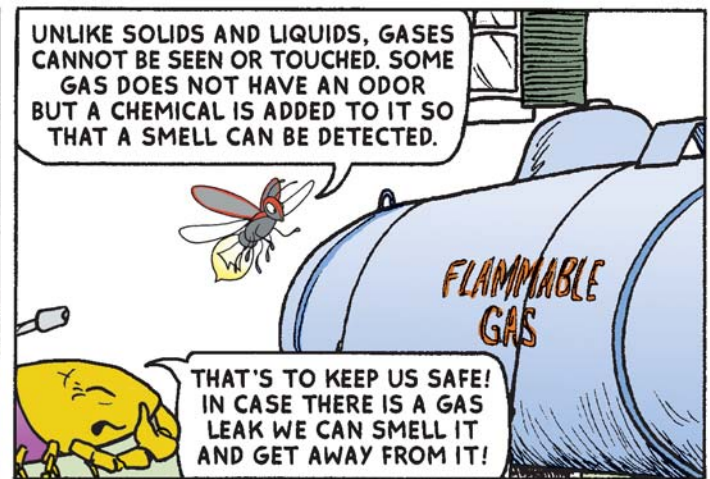


TOO BAD THESE DIRTY DISHES DON'T JUST DISSOLVE IN WARM WATER.



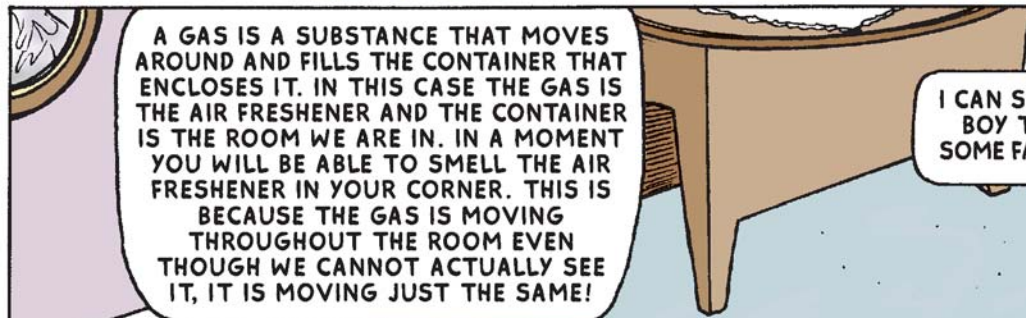
SO WHAT IS THE THIRD FORM OF MATTER, LIGHTNING?

IT IS GAS! THE OVEN THAT YOU ARE CLEANING USES GAS TO HEAT AND COOK.



UNLIKE SOLIDS AND LIQUIDS, GASES CANNOT BE SEEN OR TOUCHED. SOME GAS DOES NOT HAVE AN ODOR BUT A CHEMICAL IS ADDED TO IT SO THAT A SMELL CAN BE DETECTED.


THAT'S TO KEEP US SAFE! IN CASE THERE IS A GAS LEAK WE CAN SMELL IT AND GET AWAY FROM IT!



A GAS IS A SUBSTANCE THAT MOVES AROUND AND FILLS THE CONTAINER THAT ENCLOSES IT. IN THIS CASE THE GAS IS THE AIR FRESHENER AND THE CONTAINER IS THE ROOM WE ARE IN. IN A MOMENT YOU WILL BE ABLE TO SMELL THE AIR FRESHENER IN YOUR CORNER. THIS IS BECAUSE THE GAS IS MOVING THROUGHOUT THE ROOM EVEN THOUGH WE CANNOT ACTUALLY SEE IT, IT IS MOVING JUST THE SAME!



I CAN SMELL IT! BOY THAT'S SOME FAST GAS!



TOMORROW WE WILL EXPLORE HOW MATTER CAN ACTUALLY CHANGE FROM ONE STATE TO ANOTHER ... IT'S LIKE MAGIC!

I CAN DO MAGIC ... WATCH ME MAKE THIS COOKIE DISAPPEAR!



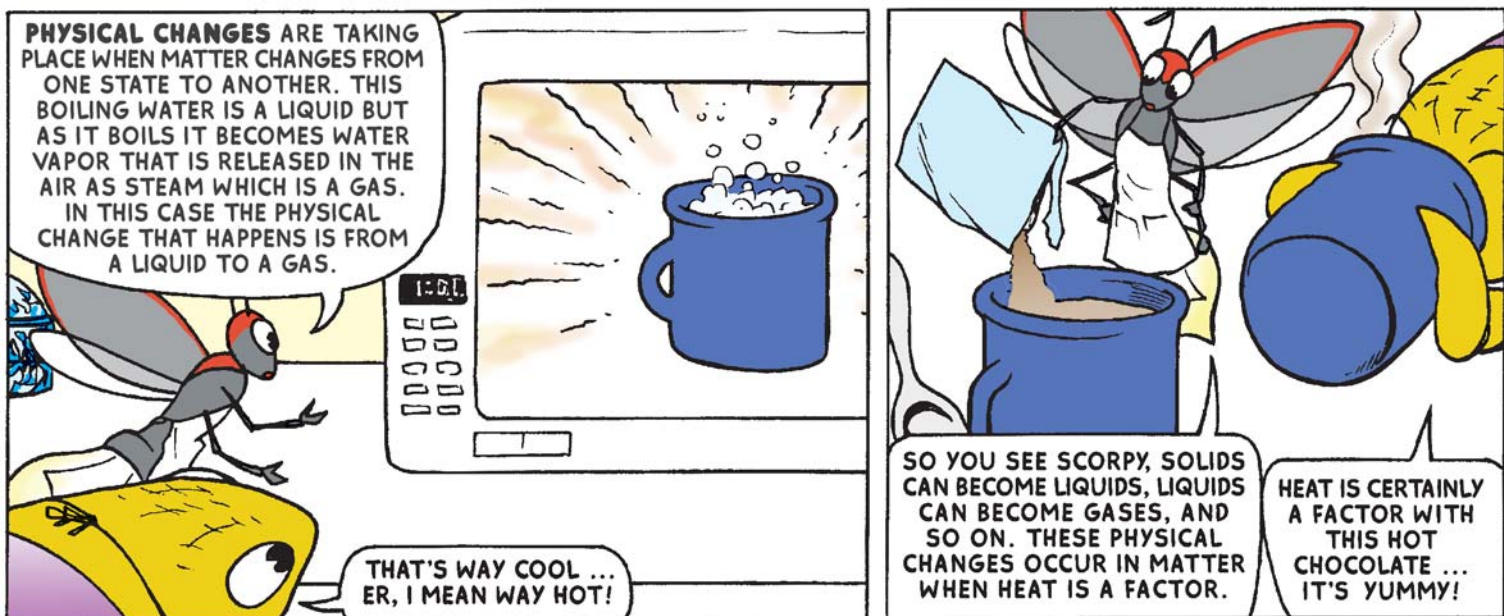
THE FREEZER IS MAGICAL! IT TURNED A LIQUID INTO A SOLID!

THAT'S RIGHT SCORPY! MATTER CAN CHANGE FROM ONE STATE TO ANOTHER!



THESE ICE CUBES STARTED OUT AS A LIQUID - WATER. AFTER SPENDING SOME TIME IN THE FREEZER THEY ARE FROZEN, BECOMING SOLIDS. BUT WHAT HAPPENS IF WE TAKE THEM OUT OF THE FREEZER AND PUT THEM IN AN AREA THAT IS WARM?

THEY MELT! WAIT A MINUTE, A FROZEN ICE CUBE OR A SOLID TURNS BACK INTO WATER, WHICH IS A LIQUID!



**PHYSICAL CHANGES** ARE TAKING PLACE WHEN MATTER CHANGES FROM ONE STATE TO ANOTHER. THIS BOILING WATER IS A LIQUID BUT AS IT BOILS IT BECOMES WATER VAPOR THAT IS RELEASED IN THE AIR AS STEAM WHICH IS A GAS. IN THIS CASE THE PHYSICAL CHANGE THAT HAPPENS IS FROM A LIQUID TO A GAS.

THAT'S WAY COOL ... ER, I MEAN WAY HOT!

SO YOU SEE SCORPY, SOLIDS CAN BECOME LIQUIDS, LIQUIDS CAN BECOME GASES, AND SO ON. THESE PHYSICAL CHANGES OCCUR IN MATTER WHEN HEAT IS A FACTOR.

HEAT IS CERTAINLY A FACTOR WITH THIS HOT CHOCOLATE ... IT'S YUMMY!