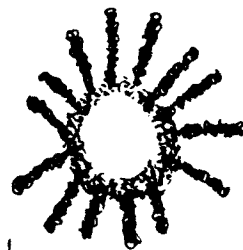




# SIPHON BOTTLES

MINI-  
UNIT



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# Siphoning

ONE WAY OF GETTING WATER OUT OF A BIG TANK (LIKE AN AQUARIUM) IS TO PUT ONE END OF A PIECE OF TUBING INTO THE TANK, AND SUCK HARD ON THE OTHER END.

THIS IS CALLED **SIPHONING**. IT GETS WATER OUT OF THE TANK, AND (USUALLY) INTO YOUR MOUTH.

ONE WAY TO AVOID GETTING A MOUTHFUL OF WATER IS TO USE A **SIPHON BOTTLE**.

**THIS IS WHAT YOU NEED TO MAKE ONE:**

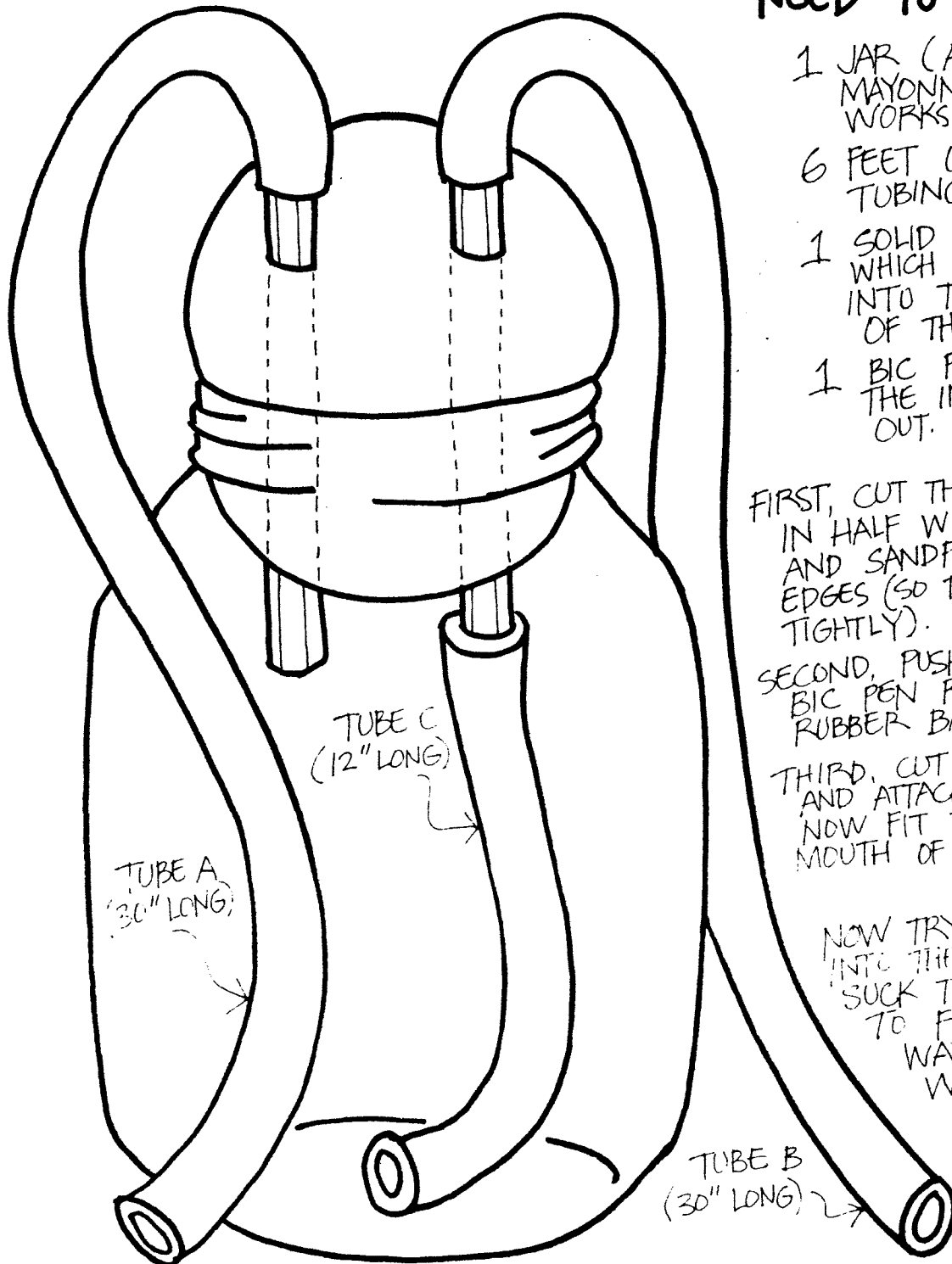
- 1 JAR (A 1-QUART MAYONNAISE JAR WORKS WELL)
- 6 FEET OF  $\frac{1}{4}$ " PLASTIC TUBING
- 1 SOLID RUBBER BALL WHICH FITS SNUGLY INTO THE MOUTH OF THE JAR
- 1 BIC PEN WITH THE INSIDES TAKEN OUT.

FIRST, CUT THE BIC PEN BARREL IN HALF WITH A HACKSAW, AND SANDPAPER ALL ROUGH EDGES (SO THE TUBING WILL FIT TIGHTLY).

SECOND, PUSH BOTH PIECES OF BIC PEN RIGHT THROUGH THE RUBBER BALL

THIRD, CUT THE TUBING AS SHOWN AND ATTACH TO THE PEN PIECES. NOW FIT THE BALL INTO THE MOUTH OF THE JAR.

NOW TRY SIPHONING WATER INTO THE BOTTLE. BLOW AND SUCK THROUGH EACH TUBE TO FIND OUT WHICH WAY THE SIPHON BOTTLE WORKS BEST.



# Measuring Air Pressure

PUT SOME COLORED WATER IN THE BOTTLE AND HOLD **TUBE B** STRAIGHT UP NEXT TO A YARDSTICK.

NOW **BLOW HARD INTO TUBE A**.  
HOW HIGH CAN YOU MAKE THE WATER RISE?

YOU CAN MEASURE THE AIR PRESSURE IN A **BALLOON** OR A **VOLLEYBALL** BY ATTACHING EITHER ONE TO **TUBE A**. (YOU WILL NEED AN **INFLATER PIN** TO ATTACH THE VOLLEYBALL)

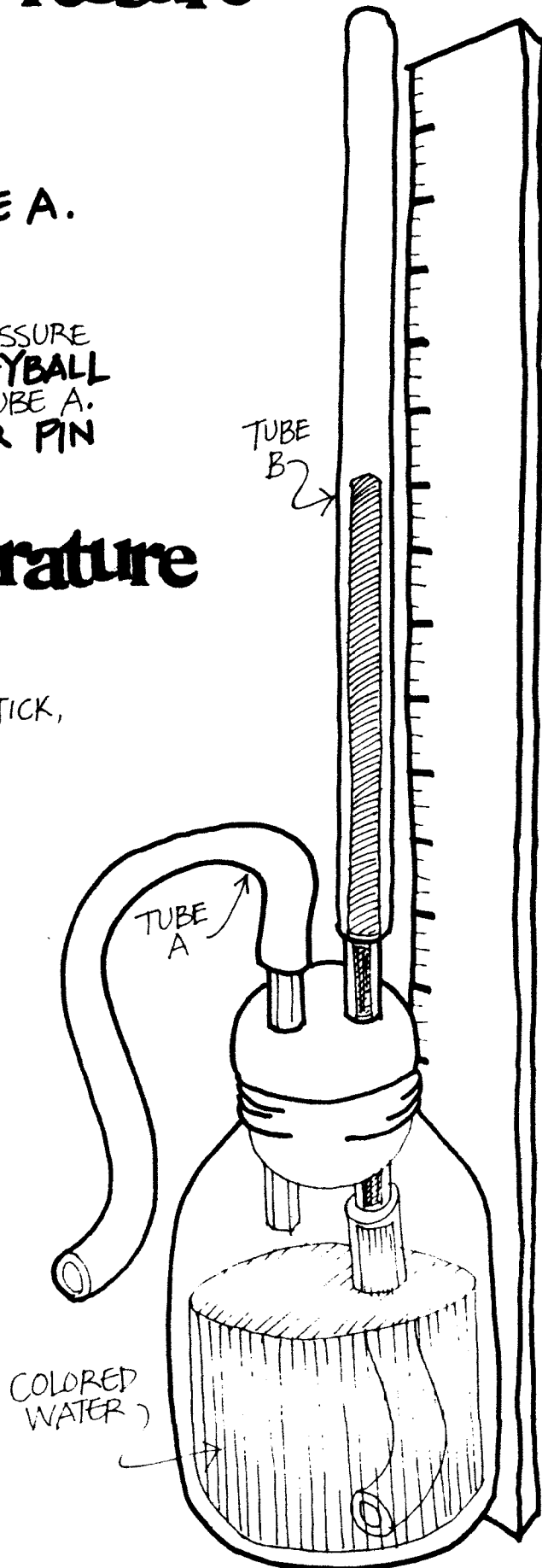
# Measuring Temperature

PUT SOME COLORED WATER IN THE BOTTLE, HOLD **TUBE B** STRAIGHT UP NEXT TO A YARDSTICK, AND **SEAL OFF TUBE A** BY PINCHING OR STOPPING IT UP.

PUT THE BOTTLE IN A BUCKET OF **HOT WATER**.  
WHAT HAPPENS TO THE COLORED WATER IN THE BOTTLE?

TRY PUTTING THE BOTTLE IN A BUCKET OF **ICE WATER**, OR ROOM TEMPERATURE WATER.

TRY THESE EXPERIMENTS WITH **DIFFERENT AMOUNTS OF COLORED WATER** IN THE BOTTLE.



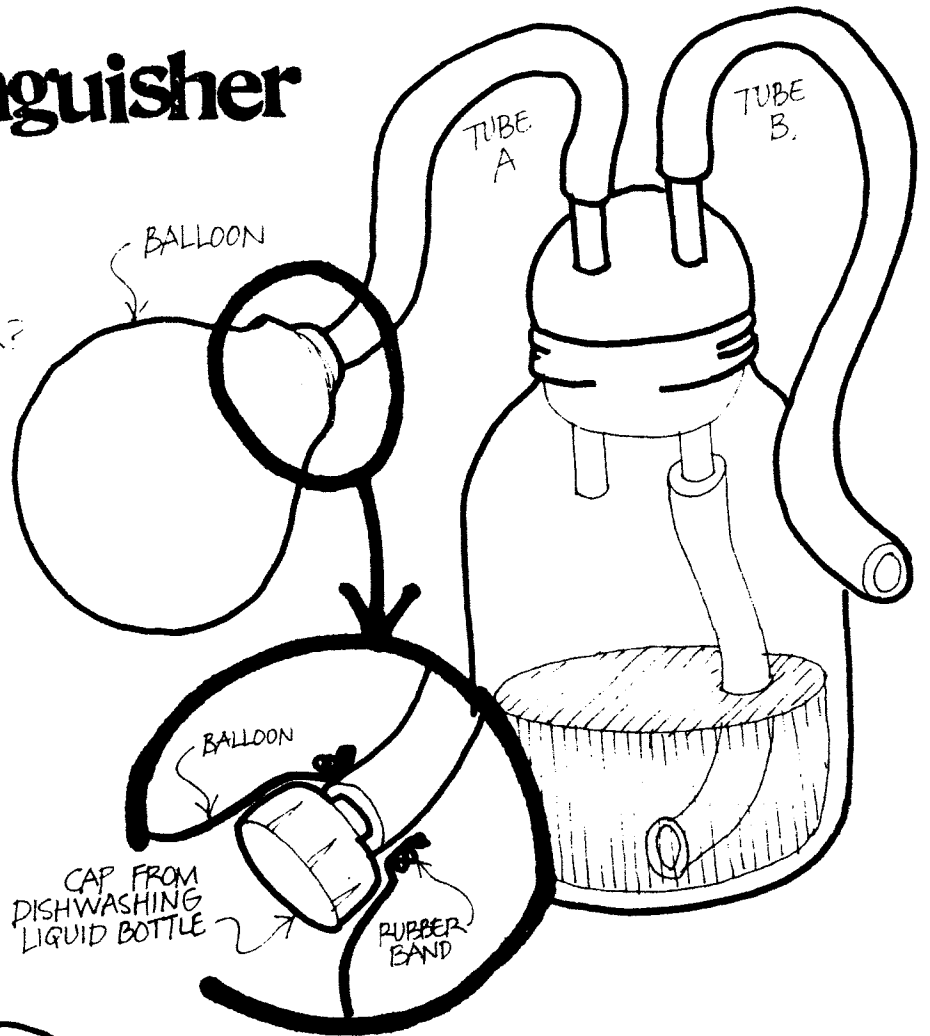
# Fire Extinguisher

ATTACH A BALLOON TO THE SIFON BOTTLE AS SHOWN.

CAN YOU BLOW UP THE BALLOON WITH AIR?

CAN YOU BLOW UP THE BALLOON WITH WATER?

CAN YOU MAKE THIS BECOME A FIRE EXTINGUISHER?



## ANOTHER ARRANGEMENT TO TRY:

ATTACH A BALLOON AS SHOWN AT LEFT, AND WATCH WHAT HAPPENS WHEN YOU BLOW OR SUCK ON TUBE A.

## OTHER EXPERIMENTS:

TRY MAKING MORE BOTTLES AND CONNECTING THEM TOGETHER IN DIFFERENT WAYS. WATCH WHAT HAPPENS IN EACH BOTTLE WHEN YOU BLOW OR SUCK ON ONE OF THEM.

