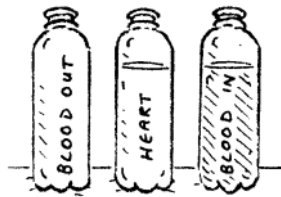


# Stoking the engine

- Use these instructions to make your own model of the heart.

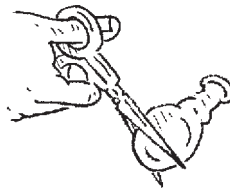
a. Label three bottles '**Heart**', '**Blood in**', and '**Blood out**'.  $\frac{3}{4}$  fill 'Blood in' and 'Heart' with water. Add food colouring to 'Blood in'.



e. Put one straw into 'Heart' bottle—valve first. Make a hole in a spare piece of balloon and push it up the straw and over the bottle to make a lid. Seal with tape.



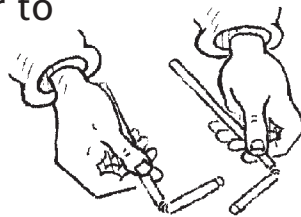
b. Cut one of your balloons in half widthways. Keep both halves.



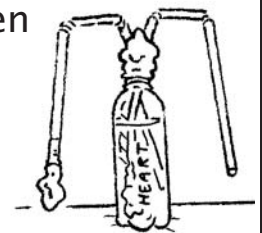
f. Put the open end of the straw into 'Blood in'.



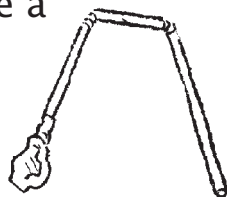
c. Take two straws. Split the end of one. Push the ends firmly together to make one long straw.



g. Make another hole in the balloon lid and push the second straw's open end through it. Put the valve end into 'Blood out'.



d. Tape the neck end of a cut balloon over the end of the long straw to make a valve.



Repeat steps b, c and d.

h. Pump the 'Heart' by squeezing the bottle. Keep pumping and watch what happens!



**Teacher's notes:** You will need: three balloons; four long, bendy straws; sticky tape; three empty plastic bottles; marker pen; food dye; scissors; string; water. Success depends on a good seal over the "Heart" bottle and ensuring the flaps on the valves don't stick together.