

The Human Heart :

Instructions for assembling the heart

[Do not mark this sheet]

1 Cut out the right atrium (1) with its blood vessels and find out where it fits in the dotted outline. Stick down the right atrium and posterior (inferior) vena cava but leave the anterior (superior) vena cava unstuck for the present.

2 Cut out the right ventricle (2), find out where it goes and stick it down except for the small upper part indicated.

3 Cut out the left ventricle (3) and stick it in place; do the same with the left atrium (4).

4 Cut out the pulmonary arteries (5) and the aortic arch (6) and arrange them so that the right pulmonary artery passes underneath the aortic arch and the left pulmonary artery is on top of the aortic arch - then stick them together.

5 Stick down the pulmonary arteries and aortic arch in place.

6 Stick down the anterior (superior) vena cava, crossing over the top of the right pulmonary artery.

7 Stick down the upper part of the right ventricle on to the top of the aortic arch.

8 Cut out the dorsal aorta (7) and stick it down at the bottom of the heart.

9 Colour the inside of the right atrium, right ventricle and part of the pulmonary artery blue (for blood with very little oxygen in it).

10 Colour the inside of the left atrium and left ventricle red (for blood with a lot of oxygen in it).

11 Label the arrows on the dotted diagram as follows:

- (a) entering the posterior (inferior) vena cava - From the lower parts of the body
- (b) entering the anterior (superior) vena cava - From the upper parts of the body

(c) right pulmonary artery - To right lung

(d) left pulmonary artery - To left lung

(e) two pulmonary veins - From the lungs

(f) branches of the aortic arch - To the upper parts of the body

(g) dorsal aorta - To the lower parts of the body

12 Label the valves of the heart as follows:

- (a) the ~~right atrio-ventricular valve~~ or tricuspid valve separating the right atrium from the right ventricle.
- (b) the ~~left atrio-ventricular valve~~ or bicuspid valve separating the left atrium from the left ventricle.
- (c) the semi-lunar (half-moon shaped) valves separating the right ventricle from the pulmonary artery and the left ventricle from the aortic arch.

13 Draw in four arrows to show the direction of blood flow through the heart as follows:

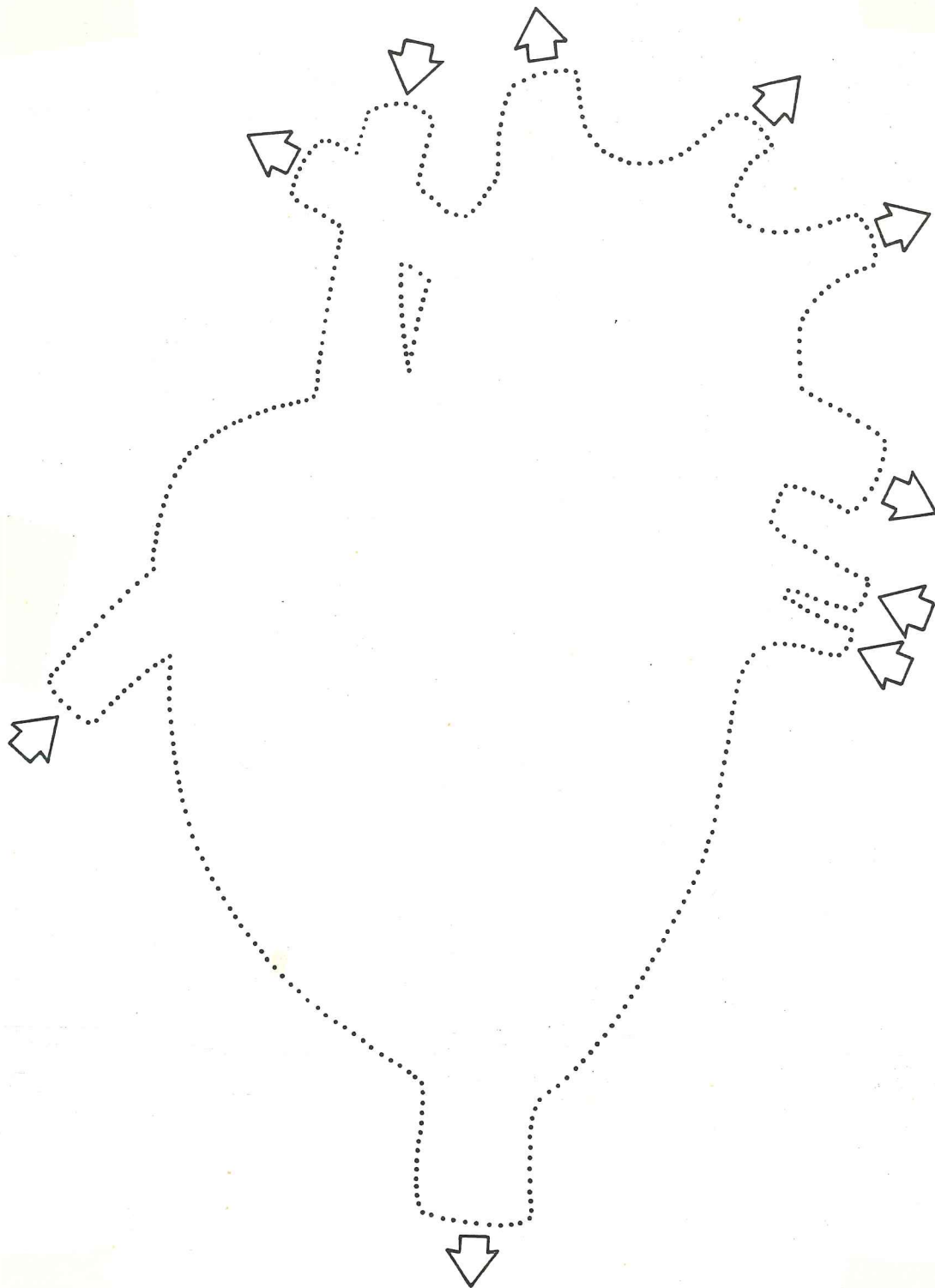
- (a) from the right atrium through the right atrio-ventricular (tri-cuspid) valve into the right ventricle.
- (b) from the right ventricle through the semi-lunar valve into the pulmonary artery.
- (c) from the left atrium through the left atrio-ventricular (bicuspid) valve into the left ventricle.
- (d) from the left ventricle up to the semi-lunar valve in the aortic arch.

14 Cut out parts 8, 9, 10 and 11. Fold down flaps a, b, c and d. Glue a to A, b to B, c to C and d to D so that the outside surface of the heart is shown.

15 Label the coronary arteries, which arise from the aortic arch.

Hand these instructions
back to your teacher
when finished.

The Human Heart



leave
unstuck at
first

