The major organs and vessels, c.1485-90

This drawing summarises Leonardo’s early understanding of the layout of the major organs and vessels, before he had carried out any significant human dissection. It is an amalgam of two medieval traditions: the ‘situs figure’, showing the position of the major organs within the trunk, and the ‘bloodletting figure’, showing the recommended sites for surgical incision into a vein.

The skull sectioned, c.1489

In these drawings Leonardo is identifying the location of the senso comune, the confluence of the senses within the brain through intersecting lines and accompanying notes.

A male nude from behind, c.1504-6

Although the shading of the body is very subtle, Leonardo clearly depicts every superficially visible muscle mass, perfectly balancing artistic beauty and anatomical accuracy.
The lungs, c.1508-9

Leonardo is attempting to convey the system of the lungs, specifically the branching of the bronchi within the lungs, not visible on the surface. The subject of Leonardo’s dissection is likely to have been a pig.

The cardiovascular system and principal organs of a woman, c.1509-10

This magnificent drawing is the culmination of Leonardo’s researches into the internal organs of the body contained in his Manuscript B.

The sheet was compiled in several stages. The outlines of the torso from the armpits downwards and the diaphragm were first sketched in red and then black chalk; the sheet was then folded in half and these outlines were pricked through the two thicknesses of paper to give a perfectly symmetrical framework for the addition of the internal features.

The muscles of the shoulder, arm and neck, c.1510-11

This sheet comprises a sequence of drawings in which Leonardo began to turn the shoulder and arm from a fully anterior view (at far right) to a fully posterior view. A small star-shaped diagram and accompanying note explain Leonardo’s intention of depicting the arm through 360 degrees from eight aspects.

The vertebral column, c.1510-11

The drawing in the upper left of the sheet depicts an ergonomically correct spine, with its curvatures perfectly shown through Leonardo’s subtle shading. To the right is a correctly articulated frontal view of the spine.
The foetus in the womb, c.1511

This sheet, perhaps the best known of all Leonardo’s anatomical drawings, makes striking use of red chalk and dense curved hatching to evoke the coiled potential of the child in the womb. The principal drawing shows the foetus in ‘complete breech’ position, with the legs crossed and the umbilical cord wrapped around the foetus’s legs.

The heart and coronary vessels, c.1511-13

The largest drawings on the left-hand page of this double sheet give two views of an ox’s heart, the subject of most of Leonardo’s heart dissections. The pulmonary valve, aorta and coronary arteries are clearly visible.

Blood flow through the aortic valve, c.1512-13

Most of the drawings on this double-page sheet are studies of the flow of blood through the aortic valve. Leonardo used a variety of illustrative techniques, such as cross-section, transparency and geometrical simplification. In notes running to over 1,500 words, he explains in great depth the mechanism by which the aortic valve closes.