

Activity sheet

Kidney dissection

Name: _____

Class: _____

Aim

To identify the main structures of a mammalian kidney.

Materials

- mammalian kidney (e.g. sheep's kidney)
- scalpel
- forceps
- dissecting board
- disposable gloves
- digital video camera (optional)

Method

- 1 Place the kidney on the dissecting board. Examine its external features. It should be possible to locate and identify three tubes entering or leaving the kidney.
- 2 Draw and label or take a digital photo and label the kidney.

- 3 Use a scalpel to cut the kidney in half lengthways by making an incision just to one side of the tubes (Figure 1).

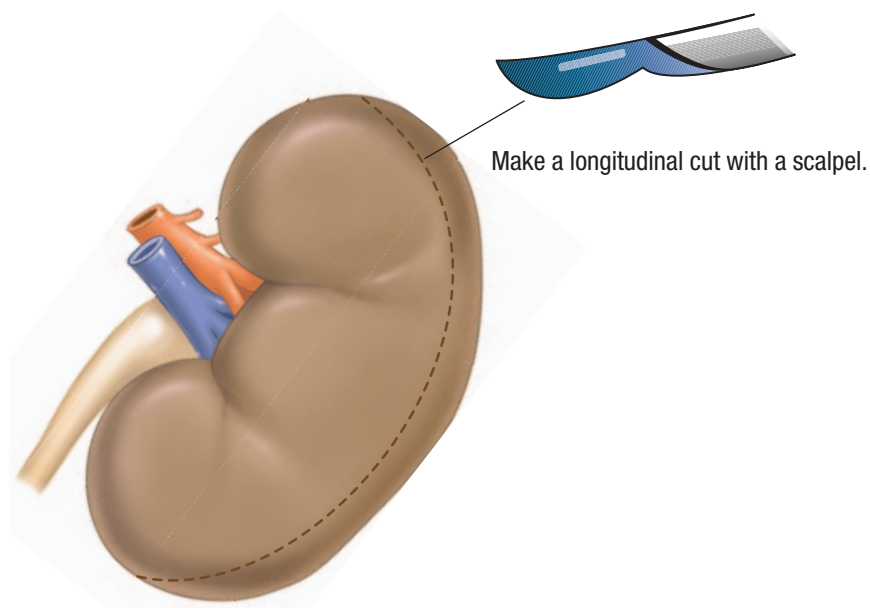


Figure 1 Cutting the kidney in half

- 4 Examine each of the cut surfaces.
- 5 Draw and label or take a digital photo and label to show the internal structures of the kidney.

- 6 Trace the pathway of blood into the kidney, and blood and urine out of the kidney. Show this on your drawing or photo.
- 7 Dispose of your dissected kidney in the appropriate manner.
- 8 Dispose of your gloves and wash your hands.

Discussion

- 1 What do you notice about the differences in appearance of the cortex and the medulla?

- 2 Where are the nephrons located? Draw a nephron onto your kidney diagram to show its position in the kidney.

WEB 2.0

Record your kidney dissection using a flip cam or video recording device. Create a vodcast or short movie, no more than 3 minutes long that captures what you did, what you observed and interesting points. Upload this to the class wiki. View other students' work. What were the similarities and what were the differences between the dissections? What are the advantages of recording a dissection?