

Instructions: Complete the chart using the animation at bit.ly/1MmiVKc (start @ 2:17)

- Secretion
- Reabsorption
- thicker & ion permeable
- Collects filtrate
- Reabsorption of H₂O
- Active transport of ions
- Diffusion of ions
- Passive movement of water
- thinner & water permeable

Specific functions of each part of the kidney

Region in nephron	What happens to the filtrate in each region of the nephron?
Bowman's capsule and glomerulus (cortex)	
Proximal tubule (cortex)	
Loop of Henle (medulla)	<p>Primary function:</p> <p>Differences between ascending and descending loop:</p> <p>Ascending loop (thick):</p> <p>Ascending loop (thin):</p> <p>Descending loop:</p>
Distal tubule and collecting duct (spans cortex and medulla)	

Test your nephron anatomy: bit.ly/2tkjW9q

Instructions: Complete the chart using the interactives at bit.ly/30qbuSi (start @ nephron section)

Region of Nephron	(Use nephron section) Direction of movement of substances (in/out) (e.g., nutrient, waste, H ₂ O, ions)	(Use proximal, loop & duct sections) Active or Passive Transport	Permeability to H ₂ O and ions (which molecules)
Proximal tubule			
Descending limb of the Loop of Henle			
Thin ascending limb of the Loop of Henle			
Thick ascending limb of the Loop of Henle			
Distal tubule			
Collecting duct			

2. Make a T-chart to identify how the blood plasma and filtrate are alike and different (e.g., contents, location, colour)
3. How does the movement of substances in the ascending limb of the loop of Henle affect the movement of substances in each of these areas:
 - a. The descending limb
 - b. The distal tubule
 - c. The collecting duct
4. What is the difference between reabsorption and secretion? Where does each occur in the nephron?
5. What areas of kidney tissue surrounding the nephron would you expect to find an area of high concentration of mitochondria? Explain.