**AICE Bio Kidney Dissection Lab Write-Up**

**Purpose:** To explore the anatomy and physiology of the mammalian kidney.

**Materials:** Porcine kidney, dissecting tray, scalpel, gloves, probes (blunt and sharp), tweezers, dissecting scissors

**Hypothesis:** Describe what you expect the pig kidney will look like. Include a description of shape, size, and approximate mass. Do you think it will be similar to a human kidney? Why or why not?

**Procedure:**1. Observe and describe outer appearance of the kidney.  
2. Using the provided rulers and string ONLY, measure the width and height of the kidney, and   
 the circumference. Follow the kidney dissection guide closely and identify all structures as   
 you go.  
3. When done, clean up thoroughly (wash all materials with soap), and wipe your lab bench   
 with a disinfecting wipe. Wash your hands and forearms well with soap.

**Data:**  
1. Create a drawing that diagrams the external structures of the kidney. Label all structures.  
2. Make a data table for your three recorded measurements.  
2. Create a drawing of the inside cross-section of the kidney. Label all structures.  
3. What structures can you not see? Why?

**Conclusions:**  
1. What is the main function of the kidney?  
2. Describe the pathway of blood through the kidney.  
3. How did you distinguish between the renal artery and the renal vein?  
4. Which area of the kidney contains the glomeruli and Bowman’s capsules?  
5. In which part of the kidney does the majority of water reabsorption occur?  
6. What structure carries urine out of the kidney and where does it go?  
7. Diagram and label a nephron. Include a brief description of what is reabsorbed or filtered/excreted in   
 each section of the nephron.