

## Chapter 1.

### **1. Measure the longest axon.**

The longest axons travel from the spinal cord in the lumbar region to the foot as part of the sciatic nerve. Therefore, measure from the upper lumbar region down the back of the leg, around the side of the ankle joint and into the arch of the foot. Another long set of axons travel from the motor cortex to the spinal cord, the Corticospinal tract axons. Measure this distance from just off the top of the head to the upper lumbar region. These axons are usually shorter than the longest axons in the sciatic nerve.

### **2. Measure the longest dendrite.**

The longest dendrite carries sensations from the toes to the spinal cord and on up to the brainstem at the base of the brain. [The dendrite from the toe enters the cell body adjacent to the spinal cord, but because it does not synaptically relay the sensory input at the cell body, it is considered to continue as a dendrite. The first relay is in the brainstem. The cell body adjacent to the spinal cord (dorsal root ganglion) maintains the viability of the dendrite.]

### **3. Determine Visual Receptive Fields and the "Blind Spot".**

The student covers one eye and stares at the teacher seated in front of him (or her). The teacher moves a finger across the visual field (to each side and up/down) and the student says when it goes out of view. This will map the visual fields of each eye. Note that they overlap except at the periphery. During testing the student will discover a "blind spot" where the teacher's finger cannot be seen. The student must keep staring straight ahead or the "blind spot" will be missed. The "blind spot" is due to lack