The cell body of a neuron is called the soma. Projections off the soma are called cell processes when it is unclear which is what (axon vs. dendrite). In the center of the soma is a large nucleus with a visible nucleolus (owl eye effect). Throughout the cytoplasm neurofibrils (cytoskeleton filaments) and Nissl bodies (collections of ribosomes) are evident.

Czura 2005
A single motor neuron can innervate just a few or a few hundred skeletal muscle fibers, depending on the muscle. The single axon from the motor neuron branches into axon collaterals, each of which will innervate a single skeletal muscle fiber by its synaptic terminal. Where the synaptic terminal meets the skeletal muscle cell is called the neuromuscular junction.
Teased Myelinated Nerve/Axons
(Medullated Nerve Teased)

Myelinated axons are covered in a layer of myelin composed of lipid-rich Schwann cells wrapped around the axon. Gaps, called Nodes of Ranvier, exist between the individual Schwann cells. The true width of the axon can only be observed in these nodes as the bulk of the material visible is the neurilemma and myelin of the Schwann cell. Surrounding each axon is a layer of endoneurium, separating it from neighboring axons.
Peripheral Nerve Cross Section

Axons stain darkly and are wrapped in a light staining layer of myelin. Endoneurium surrounds the myelin sheath. Axons are grouped together in bundles called fascicles which are surrounded by perineurium. Many fascicles are bundled together to compose the whole peripheral nerve which is wrapped in epineurium.
Spinal Cord

Anterior median fissure
Dorsal gray horn
Central canal
Anterior gray horn

Posterior median sulcus

Gray commissure

Myelinated axons
(White matter)

Neurons
(Gray matter)

Gray commissure

10X objective
(Czura 2005)

4X objective
(40X)

40X objective
(400X)

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SCCC BIO130 Lab 10 Nervous System I
Myelinated axons (White matter)

Neurons (Gray matter)

Dorsal gray horn

Central canal

Gray commissure

Anterior gray horn

Gray commissure

Anterior median fissure

Anterior funiculus/ column

Lateral funiculus/ column

Posterior median sulcus

Posterior funiculus/ column

Spinal Cord

Czura 2005