1) How is the myelin sheath around the axon formed?

2) How does the signal travel down a myelinated axon as compared to one without myelin?

3) The myelin sheath increases as we grow. Explain why small children have slower reaction times compared to teenagers.

4) Multiple sclerosis is a disease that is characterised by the degradation of the myelin sheath around nerves. Suggest why patients suffer from memory loss, imbalance and slow reaction times?

5) Explain how the signal travels from the dendrites of one nerve cell to the dendrites of another. Mention the words, action potential, axon, synapse, neurotransmitter. Draw a labelled diagram in the box provided

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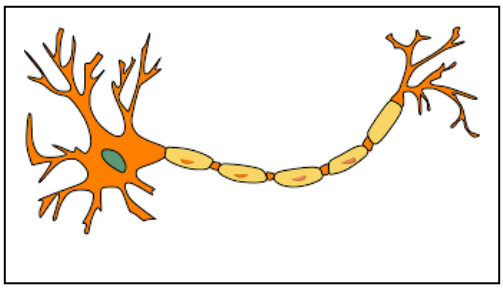
6) Consider the picture of a nerve cell shown on the right.
   a. How is a nerve cell similar to a wire?



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b. How is it different?

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7) How is a reflex action different from other responses to external stimuli?

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8) What is the purpose of a reflection action?

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