Name: Class:

Student worksheet

3.2 Nerve cells are called neurons

Pages 46–47 and 188

Nerve cells

1 What is the difference between a nerve cell and a neuron?

_____

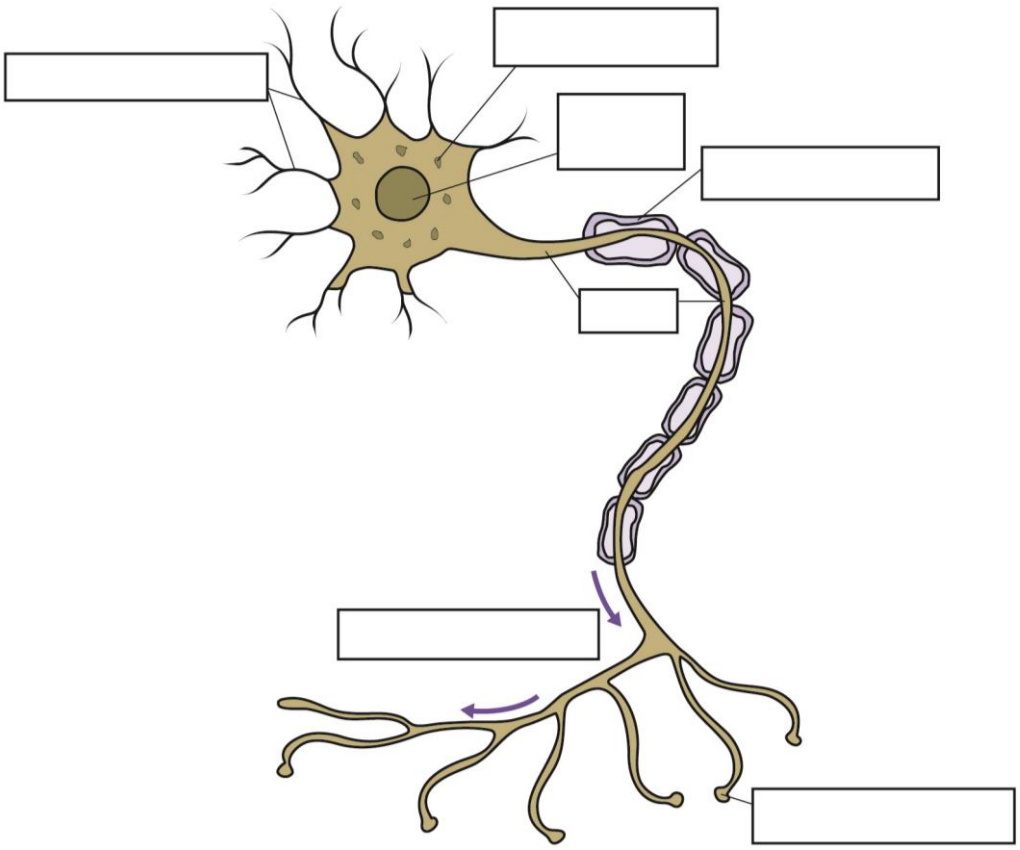
_____

2 What is the main purpose of a nerve cell?

_____

_____

3 Label the main components of the nerve cell on the diagram below and draw the direction of the impulse.



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4 Match the component of the nerve cell with its function below.

Dendrites	The region which transmits information from one neuron to another
Cell body	Controls the electrical path and insulates it from escaping; it is the fatty layer that covers the axon
Impulse direction	Also called a nerve fibre, it carries the nerve impulse
Axon	The control centre of the cell which produces proteins and maintains cell functioning
Synapse	Always from dendrites to synaptic terminal
Neurotransmitters	Thin branches that receive information and transmits it down the axon
Myelin sheath	Chemicals that drift out of the synaptic terminal and to the dendrites of the next neuron, transferring electrical messages

5 State the function of the following and where they are found within the human body.

a interneuron

_____

_____

b sensory neuron

_____

_____

c motor neuron

_____

_____

6 Using a flowchart, describe the path that that a message takes from a sense organ to the effector.

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Extend your understanding

Drugs can alter your behaviour by effecting neurotransmitters. Dopamine, for example, is one chemical that can be affected by the drug cocaine.

7 What effect does cocaine have on the uptake of dopamine into neurons?

_____

_____

_____

8 What effect does limiting your level of dopamine uptake into the neurons have on your body?

_____

_____

_____

9 Why do people experience a physical addiction to cocaine?

_____

_____

_____

10 What happens to the human body once the drug wears off?

_____

_____

_____

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