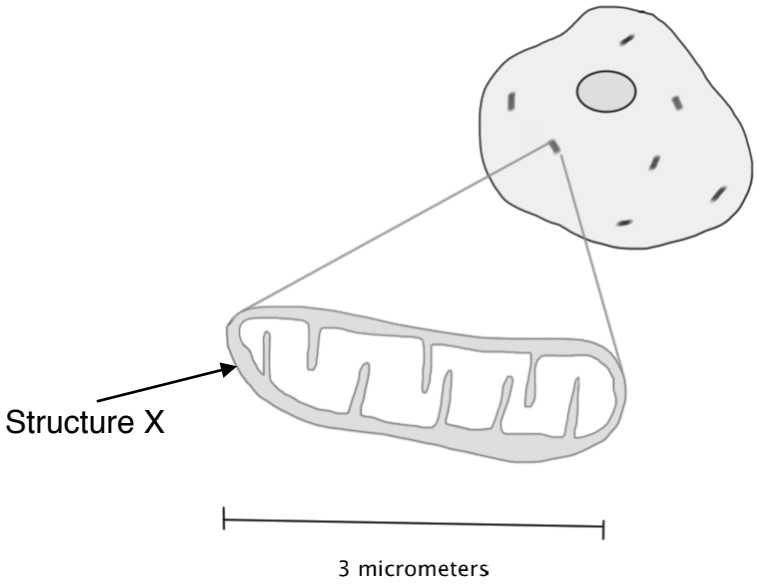
1. Cells require energy in order to stay alive. Every cell contains structures that release energy by the process of aerobic respiration.



1. (a) The diagram above shows one of those structures as seen under an electron microscope.

Name structure X.

Mitochondrion/mitochondria [1 mark]

(1 mark)

1. (b) Name two substances that are produced in structure X, as a result of releasing energy through aerobic respiration.

Carbon dioxide [1 mark]

Water [1 mark]

Bit of a trick question in a way, but it just requires you to know the aerobic respiration equation.

(2 marks)

1. (c) In mammals, the energy provided by respiration is used to maintain body temperature. Describe one other use by mammals of the energy released by aerobic respiration.

Muscle contraction [1 mark] for movement [1 mark]

Make proteins [1 mark] for growth [1 mark]

Energy is also required for something called active transport which helps move things into and out of cells. You would probably get the marks for saying that, but its not in B2.

(2 marks)

(Total 5 marks)