**Topic 1. Characteristics & Classification of living organisms**

**1.1 Characteristics of living organisms**

**Describe the characteristics of living organisms by defining the terms:**

MOVEMENT - an action by an organism or part of an organism, causing a change of position or place. Often in response to changes (e.g. the presence of a predator), to find food or a mate. Some parts of some plants can move very slowly, e.g. to obtain more light for photosynthesis.

RESPIRATION - the chemical reactions in cells that break down nutrient molecules and release energy for metabolism.

SENSITIVITY (or irritability) - the ability to detect or sense stimuli in the internal or external environment and to make appropriate responses. A stimulus is a change in the environment.

NUTRITION - taking in of materials for energy, growth and development;

 plants require light, carbon dioxide, water & ions;

 animals need organic compounds and ions & usually need water

EXCRETION - removal from organisms of the waste products of metabolism (chemical reactions in cells including respiration), toxic materials, and substances in excess of requirements

REPRODUCTION - the processes that make more of the same kind of organism.

GROWTH – a permanent increase in size and dry mass of an organism by an increase in cell number or cell size or both.

Use a mnemonic to remember the list, e.g. MRS NERG stands for the first letters of the seven characteristics of living organisms.