Explore - Life Processes

How do we tell the difference between what is alive and what is not alive in the real world? How do we know whether an animal or plant is alive?

If we see a dog running, or a cow chewing cud, or a man shouting loudly on the street, we know that these are living beings. What if the dog or the cow or the man were asleep? We would still think that they were alive, but how did we know that? We see them breathing, and we know that they are alive. What about plants? How do we know that they are alive? We see them green, some of us will say. But what about plants that have leaves of colours other than green? They grow overtime, so we know that they are alive, some will say. In other words, we tend to think of some sort of movement, either growth-related or not, ascommon evidence for being alive. But a plant that is not visibly growing is still alive, and some animals can breathe without visible movement. Sousing visible movement as the defining characteristic of life is not enough. Why?

Why do we need energy? Do we all get it in the same way?

When we walk or ride a bicycle, we are using up energy. Even when we are not doing any apparent activity, energy is needed to maintain astate of order in our body. We also need materials from outside in order to grow, develop, synthesise protein and other substances needed in the body. This source of energy and materials is the food we eat. Some organisms use simple food material obtained from inorganic sources in the form of carbon dioxide and water. These organisms, the autotrophs, include green plants and some bacteria. Other organisms utilise complex substances.These complex substances have to be broken down into simpler ones before they can be used for the upkeep and growth of the body.