

Life is a quality that distinguishes [matter](#) that has [biological processes](#), such as [signaling](#) and self-sustaining processes, from matter that does not. It is defined descriptively by the capacity for [homeostasis](#), [organisation](#), [metabolism](#), [growth](#), [adaptation](#), response to [stimuli](#), and [reproduction](#). All life over time eventually reaches a state of [death](#) and none is [immortal](#). Many philosophical definitions of [living systems](#) have been proposed, such as [self-organizing](#) systems. [Viruses](#) in particular make definition difficult as they replicate only in [host](#) cells. Life exists all over the Earth in air, water, and [soil](#), with many [ecosystems](#) forming the [biosphere](#). Some of these are harsh environments occupied only by [extremophiles](#).