An Evolutionary Journey

	Section	Subject Matter
An Evolutionary Journey	*i. Preamble*	A metaphysical discussion on the evolution of human intelligence
	ii. From chemical reaction to biological growth	Abiogenesis ● The essential presence of water on the young Earth ❁ The importance of carbon and other life-giving minerals ● Abiogenesis in an imaginary body of water - the introduction of amino acids, proteins, carbohydrates, enzymes, fatty tissue, starch and cellulose ● The birth of deoxyribonucleic acid (DNA) & the first prokaryote cells ● Early photosynthesis ❁ Biosynthetic reproduction ● Osmosis & the production of glucose ● Adenosine Triphosphate (ATP) ● The evolution of eukaryote cells ● Mitochondria, spirochaete, flagellum & cilia
	iii. Between plant and animal	The benefits of multi-cellular interdependence ● The birth of sponges
	iv. Genuine flora and fauna	The spread of algae & other autotrophs ● The development of a saprotrophic and heterotrophic existence ● Symbiosis & the evolution of worms ● The beginnings of the food chain ● The early evolution of herbivorous and carnivorous animals

An Evolutionary Journey (...continued)	*v. Organisms on the edge*	Poison as a driver of evolutionary change ● The evolution of defence mechanisms & sensory receptors in early animals ● The fundamental purpose of our primary senses ● Beyond hominid perception ❁ The coelenterates - from sponges to coral & jellyfish ● Filling evolutionary niches ● Viruses - a co-evolving biological reaction ● Fungi - a robust & hugely successful kingdom ● Extent of the biosphere
	vi. Mutual development	The tree of life & the dependence of all advanced species on basic organisms ● Mammals as the pinnacle of complexity within the animal kingdom ● The complexities of organic existence ❁ From mosses to ferns ● The first tendrils & early root systems ● The establishment of vascular plants ● Cellulose & lignin ● The evolution of wood ● From gymnosperms to the angiosperms (conifers to flowering plants) ● The growing interdependence of plants & animals ❁ Interspecies reliance & competition ● The rise of vertebrates ● From fishes and amphibians, through reptiles & dinosaurs, to mammals & birds ❁ Senses & the richness of nature ● Our cerebral dominance & emotional intelligence ● Procreation & the logic of human exploitation