

Author	<u>4 Conservation Laws Connected in Triplets; 3 Particle Classes x 4 Forces</u>					
Jaccaci -> Gowan -> Land ->	Gather Unit Accretive	Repeat Pair Replicative	Share Group Mutualistic	Transform Emergent New Unit Transformative	.	
(level)	MICROPHYSICAL REALM (3 families of 4 particles; 3 quarks x 4 charges)					
Particles, Baryons (Humans)	Big Bang, Light; "Higgs Cascade"; (Particle Accelerators)	Space-Time Matter-Antimatter Electric/Magnetic	Baryons, Leptoquarks; Gluons; 3 Quarks, 4 Charges: color, flavor, electric, spin	Symmetry-breaking; IVBs, Higgs, Hadrons; Leptons, Atoms	G A T H E R	
Atoms, Elements	Baryons, Hydrogen (Fission-Fusion; Man-Made Elements)	Electron-Neutrino Proton-Neutron Lepton-Fermion	Alpha Particle (Helium Nucleus) 4 Nucleons each of 3 Quarks; Carbon: 3 Alpha Particles	Periodic Table Elements Atomic Nucleus, Electron Shell		
Molecules, Crystals	Heavy Elements; (Magnetism and Electricity, Chemistry, Crystallography)	Electron Shell Bonding; Spin Pairs; Atomic Pairs (H2)	Carbon: 4 Bonding Sites in the 3rd Shell; Tetrahedral Bonding; Water: Tetrahedral Bonding	Molecules; Organic Polymers; Crystal Growth and Cloning		
Cyclic Chemical Systems, RNA/DNA	Organic Polymers, Crystals (Prebiotic Chemistry, Control of Fire)	Hydrogen Bonding Base Pairing RNA/DNA: AT, CG Double Helix	Metabolic RNA/DNA; 4 Nucleotides each of 3 Chemical Groups: Sugar, Phosphate, N - Base	Cyclic Chemical Systems: RNA/DNA Replication; Competition, Evolution		
(level)	BIOPHYSICAL REALM (DNA: 4 nucleotides each of 3 chemical groups; 4 nucleotides code in triplets)					
Cell, Life (Humans)	Cyclic Chemical Systems; RNA/DNA; (Genome Decoding)	DNA: Reproduction; Genetic Replication	Genetic Code; 4 Nucleotides Code in Triplets; Nucleus, Organelles, Symbionts	Cell: Collective System Identity: "Life"; "Self"; Membrane		R E P E A T
Organism	Cell (Cloning, Stem Cells)	Cell Division Meiosis-Mitosis	Specialized Organs; Perception, Brain; Memory	Organism: Collective Cellular Identity; Skin		
Species	Organism (Plant and Animal Breeding; Libraries; Natural Law)	Sexual Reproduction; Male-Female	Population Genetics; Social Organization; Abstract Communication; Government	Species: Social Identity Closed Genome		
Gaia (Planet Earth)	Species (Genetic Engineering, Terra-Forming)	Speciation Tetraploids, Hybrids	Ecosystem Mutualisms; Biogeochemical Cycles 4 Seasons of 3 Months; Earth	Gaia: Earth-Life; Atmosphere; Gravity; Magnetosphere		
(level)	ASTROPHYSICAL REALM (gravitation: 4 third-order equations; Kepler: 3 laws in 4-Dimensions)					
Star (Humans)	Planet (Current Technology: Earth Satellites, Space Station, NASA)	Earth-Sun; Earth-Moon; Space Program	Kepler's 3 Laws of Planetary Motion in 4-D Solar System Exploration Central Sun	Star: Energy, Light; Nuclear Fusion; Gravitational Orbits	S H A R E	
Galaxy	Star (Current Research; Science Fiction; Aliens; (SETI))	Binary Stars; Sun-Jupiter Voyager	Nucleosynthetic Pathway: Main Sequence Stars; Galactic Structure: Spiral Arms; Nucleus, Central Black Hole	Galaxy: Heavy Element Creation, Mixing, Dispersal, Recycling		
Universe	Galaxy (Current Cosmology: Unified Field Theory; Limit of Science)	Galactic Pairs; Milky Way- Andromeda	Gravitation: Four 3rd-order Equations; Galactic Clusters and "Foam"; Central Massive Galaxies	Electromagnetic Cosmos; Unified Field Theory Spacetime, Light; Matter, Charges, Forces		
Multiverse; First Cause	Universe (Metaphysics; Natural Philosophy (Anthropic Principle))	Universe Pairs; Antiuniverse; "Big Bang" (Asymmetry)	All Electromagnetic Universes; (All 4x3 Fractal Universes); 4 Conservation Laws in Triplets; (Constants; Mass; Higgs)	First Cause; Trinity; Tetragrammaton Multiverse: All Possible (Energy Types and Laws)		

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