Standard Model of Elementary Particles

three generations of matter (fermions)

interactions / force carriers (bosons)

	I	II	III		
mass	≈2.2 MeV/c²	≈1.28 GeV/c²	≈173.1 GeV/c²	0	≈125.11 GeV/c²
charge	⅔	⅔	⅔	0	0
spin	½	½	½	1	0
	u	c	t	g	H
	up	charm	top	gluon	higgs
	≈4.7 MeV/c²	≈96 MeV/c²	≈4.18 GeV/c²	0	
	−⅓	−⅓	−⅓	0	
	½	½	½	1	
	d	s	b	γ	
	down	strange	bottom	photon	
	≈0.511 MeV/c²	≈105.66 MeV/c²	≈1.7768 GeV/c²	≈91.19 GeV/c²	
	−1	−1	−1	0	
	½	½	½	1	
	e	μ	τ	Z	
	electron	muon	tau	Z boson	
	<1.0 eV/c²	<0.17 MeV/c²	<18.2 MeV/c²	≈80.360 GeV/c²	
	0	0	0	±1	
	½	½	½	1	
	ν_e	ν_μ	ν_τ	W	
	electron neutrino	muon neutrino	tau neutrino	W boson	

QUARKS

LEPTONS

GAUGE BOSONS

VECTOR BOSONS

SCALAR BOSONS