

Three generations  
of matter (fermions)

	I	II	III		
mass →	2.4 MeV/c <sup>2</sup>	1.27 GeV/c <sup>2</sup>	171.2 GeV/c <sup>2</sup>	0	~125 GeV/c <sup>2</sup>
charge →	2/3	2/3	2/3	0	0
spin →	1/2	1/2	1/2	1	0
name →	u up	c charm	t top	γ photon	H Higgs boson
Quarks	4.8 MeV/c <sup>2</sup> -1/3 1/2 d down	104 MeV/c <sup>2</sup> -1/3 1/2 s strange	4.2 GeV/c <sup>2</sup> -1/3 1/2 b bottom	0 0 1 g gluon	
	<2.2 eV/c <sup>2</sup> 0 1/2 ν <sub>e</sub> electron neutrino	<0.17 MeV/c <sup>2</sup> 0 1/2 ν <sub>μ</sub> muon neutrino	<15.5 MeV/c <sup>2</sup> 0 1/2 ν <sub>τ</sub> tau neutrino	91.2 GeV/c <sup>2</sup> 0 1 Z <sup>0</sup> Z boson	
	0.511 MeV/c <sup>2</sup> -1 1/2 e electron	105.7 MeV/c <sup>2</sup> -1 1/2 μ muon	1.777 GeV/c <sup>2</sup> -1 1/2 τ tau	80.4 GeV/c <sup>2</sup> ±1 1 W <sup>±</sup> W boson	Gauge bosons