ELEMENTARY PARTICLES

	LEPTONS				QUARKS			
	symbol	**name**	**charge**	**mass**	**symbol**	**name**	**charge**	**mass**
1st generation	e	electron	-1	0.5	u	up	+2/3	2.5
	ν_e	electron neutrino	0	≈ 0	d	down	- 1/3	5
2nd generation	μ	muon	-1	106	s	strange	- 1/3	95
	ν_μ	muon neutrino	0	≈ 0	c	charm	+2/3	1300
3rd generation	τ	tau	-1	1777	b	bottom	- 1/3	4200
	ν_τ	tau neutrino	0	≈ 0	t	top	+2/3	175000

HIGGS

symbol	H
name	Higgs boson
charge	0
mass	125000

FORCE PARTICLES

force	symbol	name	charge	mass	acts on	strength	range
strong	g	gluon	0	≈ 0	all quarks	1	extremely small
electromagnetic	γ	photon	0	0	all charges	1/137	infinite
weak	W^+ W^- Z	w-plus boson w-minus boson z-boson	+1 -1 0	80000 80000 91000	quarks and leptons	1/1000000	extremely small
gravity	G	graviton	0	0	all masses	1/10000000000000000000000000000000000000	infinite