

MOTION AND ENERGY

$$\bar{v} = \frac{\Delta d}{\Delta t}$$

$$a = \frac{V_f - V_i}{\Delta t}$$

$$F = ma$$

$$F_g = mg$$

$$W = F\Delta d$$

$$P = \frac{W}{\Delta t}$$

$$PE_g = mgh = F_g h$$

$$KE = \frac{1}{2}mv^2$$

$$V_w = f\lambda$$

v = velocity

d = position

t = time

a = uniform acceleration

F = force

m = mass

F_g = weight

g = acceleration due gravity
on Earth = 9.8 m/s/s

W = work

P = power

PE_g = gravitational
potential energy

h = height

KE = kinetic energy

V_w = wave velocity

f = frequency

λ = wavelength

V = electrical potential
difference

I = current

R = resistance

P = power

D = density

m = mass

V = volume

ELECTRICITY

$$V = IR$$

$$P = VI$$

DENSITY

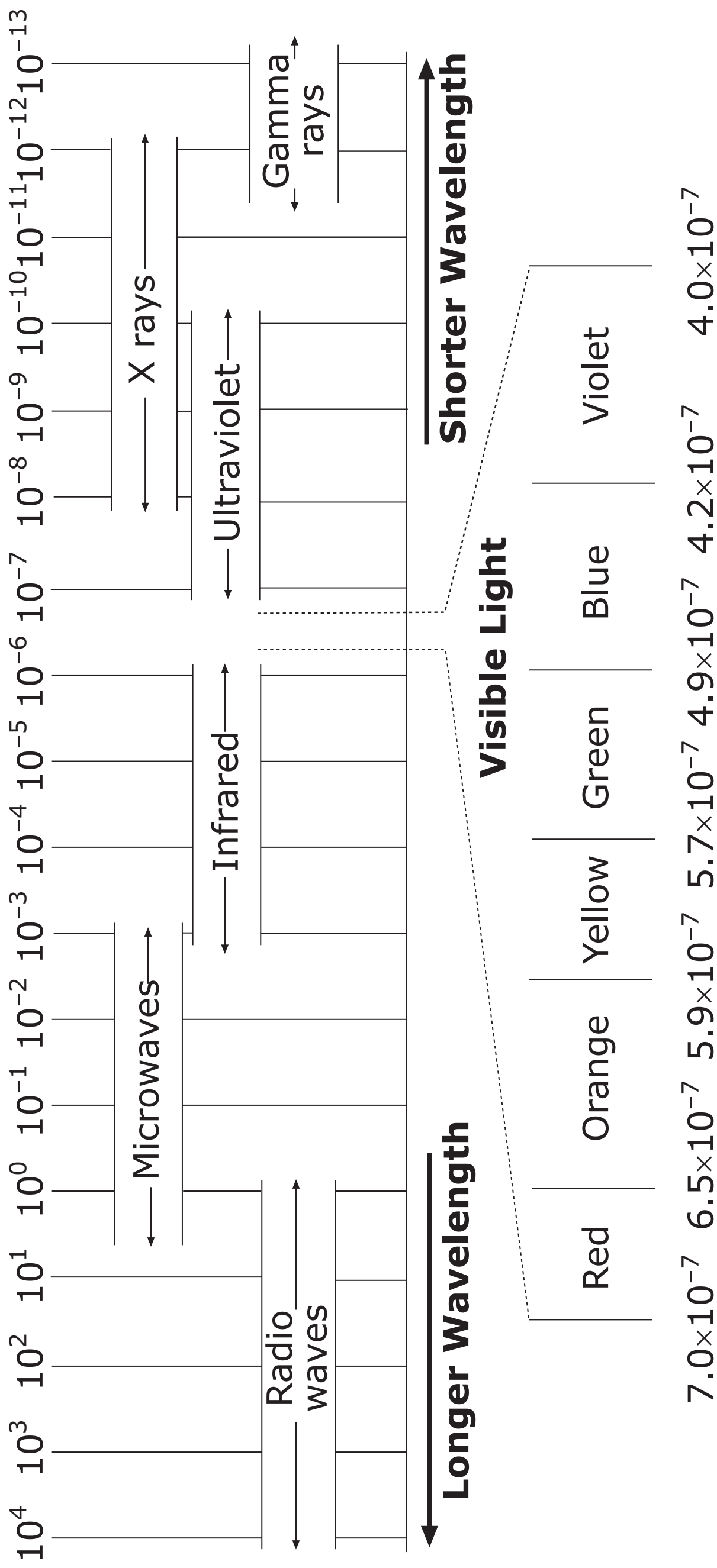
$$D = \frac{m}{V}$$

PERIODIC TABLE

1 IA								
1 H Hydrogen 1.008	2 IIA							
3 Li Lithium 6.941	4 Be Beryllium 9.012							
11 Na Sodium 22.99	12 Mg Magnesium 24.31	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8 VIIIB	9 VIIIB
19 K Potassium 39.10	20 Ca Calcium 40.08	21 Sc Scandium 44.96	22 Ti Titanium 47.88	23 V Vanadium 50.94	24 Cr Chromium 51.99	25 Mn Manganese 54.94	26 Fe Iron 55.85	27 Co Cobalt 58.93
37 Rb Rubidium 85.47	38 Sr Strontium 87.62	39 Y Yttrium 88.91	40 Zr Zirconium 91.22	41 Nb Niobium 92.91	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91
55 Cs Cesium 132.91	56 Ba Barium 137.38	57 La Lanthanum 138.91	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.84	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22
87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium (227)	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (263)	107 Bh Bohrium (264)	108 Hs Hassium (269)	109 Mt Meitnerium (268)

58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25
90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.04	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)

Electromagnetic Spectrum (measurement in meters)



Polyatomic Ions	
NH_4^+	Ammonium
$\text{C}_2\text{H}_3\text{O}_2^-$	Acetate
ClO_3^-	Chlorate
MnO_4^-	Permanganate
NO_3^-	Nitrate
OH^-	Hydroxide
CO_3^{2-}	Carbonate
CrO_4^{2-}	Chromate
SO_4^{2-}	Sulfate
PO_4^{3-}	Phosphate