1	2											3	4	5	6	7	0		
				Key			1 H hydrogen 1										4 He helium 2		
7 Li	9 Be	relative atomic mass atomic symbol										11 B	12 C	14 N	16 O	19 F	20 Ne		
lithium 3	beryllium 4	atomic (proton) number				r						boron 5	carbon 6	nitrogen 7	oxygen 8	fluorine 9	neon 10		
23	24												28	31	32	35.5	40		
Na	Mg												Si	P	S	Cl	Ar		
sodium 11	magnesium 12											aluminium 13	silicon 14	phosphorus 15	^{sulfur} 16	chlorine 17	argon 18		
39	40	45	48	51	52	55	56	59	59	63.5	65	70	73	75	79	80	84		
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
potassium	calcium	scandium	titanium	vanadium	chromium	manganese	iron	cobalt	nickel	copper	zinc	gallium	germanium	arsenic	selenium	bromine	krypton		
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
85	88	89	91	93	96	[98]	101	103	106	108	112	115	119	122	128	127	131		
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
rubidium	strontium	yttrium	zirconium	niobium	molybdenum	technetium	ruthenium	rhodium	palladium	silver	cadmium	indium	tin	antimony	tellurium	iodine	xenon		
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		
133	137	139	178	181	184	186	190	192	195	197	201	204	207	209	[209]	[210]	[222]		
Cs	Ba	La *	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	TI	Pb	Bi	Po	At	Rn		
caesium	barium	lanthanum	^{hafnium}	tantalum	tungsten	rhenium	osmium	iridium	platinum	^{gold}	mercury	thallium	lead	bismuth	polonium	astatine	radon		
55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86		
[223] Fr	[226] Ra	[227] Ac *	[261] Rf	[262] Db	[266] Sg	[264] Bh	[277] Hs	[268] Mt	[271] Ds	[272] Rg	Eleme	Elements with atomic numbers 112 – 116 have been							
francium 87	radium 88	actinium 89	rutherfordium 104	^{dubnium}	seaborgium 106	^{bohrium} 107	hassium 108	meitnerium 109	darmstadtium 110	roentgenium 111		reported but not fully authenticated							

* The Lanthanides (atomic numbers 58 - 71) and the Actinides (atomic numbers 90 - 103) have been omitted.

Relative atomic masses for Cu and Cl have not been rounded to the nearest whole number.

Forces

Key Vocabulary:

Acceleration: The rate at which an object's velocity changes Air resistance: The force of air acting on a moving object **Balanced forces:** Two forces of equal size acting in opposite directions **Contact force:** A force that must touch an object to affect it **Friction:** The force caused by one surface touching another surface **Gravity:** A force that attracts an object towards the centre of another object Magnetism: The force between two magnets or between a magnet and a magnetic material

Motion: Movement Newton: The unit for force **Non-contact force:** A force that can affect an object without touching it **Tension:** The force acting on an object that has been stretched Thrust: A 'pushing' force **Up-thrust:** The force that acts upwards on an object, often from air-resistance or water Velocity: The scientific word for 'speed' Weight: The force that results from an object's mass and the effect of gravity

Energy Stores

Kinetic energy – All moving things have this. The amount depends on the mass of the object and it's speed.

Internal energy – All objects have this. If it is caused by the movement of the particles in the object, it is THERMAL ENERGY. If it is due to how the particles are bonded together, it is CHEMICAL ENERGY.

Elastic potential energy – This is energy stored in stretched or squashed materials.

Gravitational potential energy – This is the energy an object has due to where it is positioned. It depends on the mass of the object, the height the object moves and the strength of gravity (the Gravitational field strength)

Electrical energy – Some objects carry electrical charges (called electrons). They can exert forces on each other.

Magnetic energy – Some objects can be magnetised and create magnetic fields. They can exert forces on other magnetised objects.

Energy transfers

