CCEA AS 1

Spec Ref	Topic	TAP episode	comments
1.1	**Units, base units**		Assumed?
1.2	**scalars and vectors, adding & resolving**	201	
1.3	**speed, velocity and acceleration, equations of motion**	205, 206	
	acceleration of free fall, *g*	206	
	velocity-time and displacement-time graphs	205	
1.4	**projectile motion**	207	
1.5	**State Newton's laws of motion**	210/211/212	
	***F* = *ma*, friction as a force that opposes motion**	211	No refs to friction
1.6	**principle of moments**	203	
1.7	**work done, potential energy, kinetic energy**	214, 216	
	principle of conservation of energy	217	
	efficiency and power, *P* = *Fv*	214-1, 218	Efficiency defined in 214-1
1.8	**Hooke's law *f* = *kx***	227	
	elastic and plastic deformation and elastic limit	227	
	stress, strain, ultimate tensile stress	228	UTS not mentioned
	Young modulus	228	
1.9	***I* = *ΔQ/Δt***	102	
1.10	***V* = *W/q* = *P/I***	105, 106	
	the volt, emf, pd	105*	See note *
1.11	**series and parallel circuits**	114	
	Ohm's law *R=V/I* , $P=I^2R$	108, , 106	
	resistivity *R=ρl/A*	112	
	superconductivity	110	
	***V/I* graphs for metallic conductor and (ntc) thermistor**	109	Thermistor in 110
	internal resistance, $V = \varepsilon - Ir$	120/121	
1.12	**conservation of charge and energy**		KIrchoff's laws 117
	resistors in series and in parallel	114	
	potential divider $V_{out} = R_1V_{in}/R_1+R_2$	118	

* The volt, emf and pd are all used in Episode 105, in the discussion after 105-2, but there is little discussion of the difference between them here.