Revision Checklist: GCSE AQA Physics (Higher Tier)

SPARK EDUCATION TRUST

1	2	3	4	5

No understanding — Exam-ready

EGGLESCLIFFE SCHOOL AND SIXTH FORM COLLEGE

	1. ENERGY	Rate topics 1 to 5
a.	Energy stores	
b.	Changes in energy	
c.	Kinetic energy	
d.	Gravitational & elastic potential energy	
e.	Specific heat capacity	
f.	Power & work done	
g.	Conduction	
h.	Unwanted energy transfers	
i.	Efficiency	
j.	Energy resources (renewable & non-renewable)	
k.	Energy resources (environmental impact)	

	2. ELECTRICITY	Rate topics 1 to 5
a.	Circuit diagram symbols	
b.	Charge & current	
c.	Current, resistance & potential difference	
d.	I-V characteristic curves	
e.	LDR & thermistor	
f.	Series & parallel circuits	
g.	D.C. & A.C.	
h.	Mains electricity	
i.	Power in circuits	
j.	Energy transfers in electrical appliances	
k.	The national grid	
l.	Role of transformers	
m.	Static electricity	
n.	Electric fields	

	3. PARTICLE MODEL OF MATTER	Rate topics 1 to 5
a.	Density	
b.	Changes of state	
c.	Internal energy	
d.	Specific heat capacity *(again)*	
e.	Specific latent heat	
f.	Particle motion in gases	
g.	Pressure & volume of gases	
h.	Work done on a gas	

	4. ATOMIC STRUCTURE	Rate topics 1 to 5
a.	Structure of an atom	
b.	Mass number, atomic number & isotopes	
c.	Development of atomic model	
d.	Radioactive decay	
e.	Properties of nuclear radiation	
f.	Nuclear equations	
g.	Half life	
h.	Contamination & irradiation	
i.	Background radiation	
j.	Half-life & hazards	
k.	Uses of nuclear radiation	
l.	Nuclear fission	
m.	Nuclear fusion	

	5. FORCES	Rate topics 1 to 5
a.	Scalars & vectors	
b.	Contact & non-contact forces	
c.	Gravity & weight	
d.	Resultant forces	
e.	Vector diagrams	
f.	Work done	
g.	Springs & elasticity	
h.	Moments	
i.	Pressure in a fluid	
j.	Pressure in a column of liquid	
k.	Upthrust	
l.	Atmospheric pressure	
m.	Distance & displacement	
n.	Speed & velocity	
o.	Distance-time graphs	
p.	Acceleration	
q.	Velocity-time graphs	
r.	Terminal velocity	
s.	Newton's first law	
t.	Newton's second law & inertia	
u.	Newton's third law	
v.	Stopping distance & reaction time	
w.	Factors affecting braking distance	
x.	Momentum	
y.	Car safety features	

	6. WAVES	Rate topics 1 to 5
a.	Transverse & longitudinal waves	
b.	Properties of waves	
c.	Reflection	
d.	Refraction	
e.	Ray diagrams (reflection & refraction)	
f.	Sound waves	
g.	Waves for detection & exploration	
h.	Electromagnetic (EM) spectrum	
i.	Radio waves	

j.	Risks of EM radiation	
k.	Uses of EM waves	
l.	Ray diagrams (lenses)	
m.	Visible light	
n.	Infrared radiation	
o.	Black bodies & radiation	

	7. MAGNETISM & ELECTROMAGNETISM	Rate topics 1 to 5
a.	Bar magnets	
b.	Magnetic fields	
c.	Electromagnets	
d.	The motor effect & Fleming's left-hand rule	
e.	Electric motors & loudspeakers	
f.	The generator effect	
g.	Alternators & dynamos	
h.	Microphones	
i.	Transformers	

	8. SPACE PHYSICS	Rate topics 1 to 5
a.	Our solar system	
b.	The life cycle of a star	
c.	Orbital motion	
d.	Natural & artificial satellites	
e.	Red shift	
f.	The big bang theory	

PRACTICALS	Rate topics 1 to 5
RP 1: "An investigation to determine the specific heat capacity of one or more materials."	
RP 2: "Investigate the effectiveness of different materials as thermal insulators, and factors that affect the thermal insulation properties of a material."	
RP 3a: "Investigate how the length of a wire at constant temperature affects the resistance of electrical circuits."	
RP 3b: "Investigate how combinations of resistors in series and parallel affect the resistance of electrical circuits."	
RP 4: "Use circuit diagrams to investigate the I-V characteristics of a filament lamp, a diode and a resistor at constant temperature."	
RP 5: "Determine the densities of regular and irregular solid objects and liquids."	
RP 6: "Investigate the relationship between force and extension of a spring."	
RP 7: "Investigate separately how varying the force and mass of an object affect its acceleration."	
RP 8: "Measure the frequency, wavelength and speed of waves in a ripple tank, and waves in a solid."	
RP 9: "Investigate the reflection of light off different surfaces, and the refraction of light by different substances."	
RP 10: "Investigate how the amount of infrared radiation absorbed and radiated changes depending on the type of surface."	

ASSESSMENTS	Duration	Marks	Topics
Paper 1 02/06/2026	1 hour 45 minutes	100 marks	Topics 1 – 4
Paper 2 15/06/2026	1 hour 45 minutes	100 marks	Topics 5 - 8