Post 16 Personal Learning Checklist (PLC)

NAME:

SUBJECT: Physics (Further Mechanics)

LEVEL: A2

Area of Specification	Topic	Paper	Red	Amber	Green
use the expression p = mv	1. Further mechanics	6PH04			
investigate and apply the principle of conservation of linear momentum to problems in one dimension	1. Further mechanics	6PH04			
investigate and relate net force to rate of change of momentum in situations where mass is constant (Newton's second law of motion)	1. Further mechanics	6PH04			
derive and use the expression Ek = p2/2m for the kinetic energy of a non-relativistic particle	1. Further mechanics	6PH04			

Area of Specification	Topic	Paper	Red	Amber	Green
analyse and interpret data to calculate the momentum of (non-relativistic) particles and apply the principle of conservation of linear momentum to problems in one and two dimensions	1. Further mechanics	6PH04			
explain and apply the principle of conservation of energy, and determine whether a collision is elastic or inelastic	1. Further mechanics	6PH04			
expressangulardisplacementinradiansand in degrees, and convert between those units	1. Further mechanics	6PH04			
explain the concept of angular velocity, and recognise and use the relationships $v = \omega r$ and $T = 2\pi/\omega$	1. Further mechanics	6PH04			
explain that a resultant force (centripetal force) is required to produce and maintain circular motion	1. Further mechanics	6PH04			
use the expression for centripetal force $F = ma = mv2/r$ and hence derive and use the expressions for centripetal acceleration $a = v2/r$ and $a = r\omega2$.	1. Further mechanics	6PH04			