GZ Science Resources

Key Question Types
Mechanics AS 90940

Describing motion in Graphs

1. Check if graph is distance/time or speed/time. Link gradient of line to motion. Back up with data or calculation
2. Repeat for each section of graph
3. Make sure EVERY section is described and linked to data

Distance from Speed/time graph

1. Determine the size of each section in the graph
2. Calculate the area of each section (show working)
3. TOTAL area (as distance) and compare to other distance if required

Net Force

1. Define NET force
2. Link net force to motion type and direction
3. Describe and compare each force involved

Mass and Weight

1. Define and Compare Mass with Weight
2. Explain Mass does not change but weight can
3. Show working and remember units

Pressure

1. Explain sinking/traction is due to pressure
2. Link pressure to both weight force and area
3. Link pressure to example with comparison
4. Use calculations to back up statement

Work and Power

1. Show working and use correct units $W = Fd$ then $P = W / t$
2. Compare both Force and Distance of both
3. Link power to time taken

Conservation of Energy

1. If question states assuming conservation of energy then Ek = Ep
2. Substitute one type of energy for the other then rearrange equation to find value.

"Missing" Energy

1. Link type of energy to position
2. Explain that the "missing energy" was due to friction converting a portion into heat energy
3. Use equation to demonstrate explanation