

Changes in Energy

Mark Scheme

Level	GCSE (9-1)
Subject	Combined Science: Trilogy - Physics
Exam Board	AQA
Topic	6.1 Energy
Sub-Topic	Changes in Energy
Difficulty Level	Bronze Level
Booklet	Mark Scheme

Time Allowed: 14 minutes

Score: /13

Percentage: /100

Grade Boundaries:

M1.(a)	thermometer	1
	stopclock / stopwatch <i>accept measuring cylinder</i> <i>accept top pan balance</i>	1
(b)	independent: type of oil	1
	dependent: temperature rise in °C	1
(c)	wear safety goggles	1
	oil not heated directly <i>accept any reasonable comment about not handling hot apparatus.</i>	1
(d)	repeat the experiment	1
	and calculate the mean temperature rise	
	OR	
	heat the oil for a longer period of time (1)	
	to get a wider range of temperatures (1)	1

(e) $(17 + 17 + 18) / 3 (= 17.33)$

1

temperature rise = 17 (°C)

1

accept 17 (°C) with no working shown for 2 marks

allow 17.33 with no working shown for 1 mark

(f) $E = 0.025 \times 1800 \times 20$ (J)

1

$E = 900$ (J)

1

allow 900 without working shown for the 2 calculation marks

Joule

1

[13]