A2 PRACTICAL 1

Finding activation energy (Grid)

CPAC Criteria		other	1	2a	2b	2c	2d	3a	3b	4a	4b	5a	5b
Procedure & results	Followed instructions carefully and independently												
	Worked safely												
	Good straight line for graph												
Recording of results	Times and temperatures in a suitable table – drawn with ruler with headings + units												
	Start, end and average temperatures shown												
	Includes 1/T and ln (1/time) in table												
	Correctly calculates /T and ln (1/time)												
Calculations & graphs	Plots ln (i/time) v 1/T												
	Suitable scales												
	Axes labelled												
	Points plotted correctly												
	Best fit straight line drawn well												
	Gradient calculated correctly												
	Finds E_a correctly from gradient												
	Gives correct units												

	Good evidence	Working towards	Description
1			Correctly follows instructions to carry out the experimental techniques or procedures.
2a			Correctly uses appropriate instrumentation, apparatus and materials (including ICT) to carry out investigative activities, experimental techniques and procedures with minimal assistance or prompting.
2b			Carries out techniques or procedures methodically, in sequence and in combination, identifying practical issues and making adjustments when necessary.
2c			Identifies and controls significant quantitative variables where applicable, and plans approaches to take account of variables that cannot readily be controlled.
2d			Selects appropriate equipment and measurement strategies in order to ensure suitably accurate results.
3a			Identifies hazards and assesses risks associated with these hazards when carrying out experimental techniques and procedures in the lab or field.
3b			Uses appropriate safety equipment and approaches to minimise risks with minimal prompting.
4a			Makes accurate observations relevant to the experimental or investigative procedure.
4b			Obtains accurate, precise and sufficient data for experimental and investigative procedures and records this methodically using appropriate units and conventions.
5a			Uses appropriate software and/or tools to process data, carry out research and report findings.
5b			Sources of information are cited demonstrating that research has taken place, supporting planning and conclusions.