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| **Alternative Evidence Gathering Template – Internal Assessment** | | | | | | | | | | | | | | | |  | |
| These templates must only be used to record student achievement and report results where remote assessment is the only practical option and the collection of direct assessment evidence from students has not been at all possible. ‘Alternative Evidence’ is student evidence for internally assessed standards that has been seen or heard within the teaching and learning programme. These templates do not signal a reduction in what is accepted for each grade, but rather a means of summarising evidence for reporting. These templates must be viewed in conjunction with the standard and assessment advice forwarded to schools to ensure that valid, credible and reliable assessment and learning has occurred before the standard is awarded. While physical evidence of student work does not need to be attached, the assessor decisions made must also be verified internally before reporting results. | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | |
| Student ID | | Student 1 | | | | | | | | | | | Subject | Physics | | Level | 3 |
| Notes | |  | | | | | | | | | | | Standard No. | 91521 | | Version | 2 |
| Standard Title | | Carry out a practical investigation to test a physics theory relating two variables in a non-linear relationship | | | | | | | | | | | | | | Credits | 4 |
|  | | | | | | | | | | | | |  | | |  | |
| **Achieved** | | | | | | | | | **Merit** | | | | | | **Excellence** | | |
| Carry out a practical investigation to test a physics theory relating two variables in a non-linear relationship. | | | | | | | | | Carry out an in-depth practical investigation to test a physics theory relating two variables in a non-linear relationship. | | | | | | Carry out a comprehensive practical investigation to test a physics theory relating two variables in a non-linear relationship. | | |
|  | | | | | | | | | | | | |  | | |  | |
| **Key requirements (list):** | | | | | | A | | | M | | | E | **Describe or attach the evidence considered.** | | | **Explain how the judgement was made.** | |
| Collects data relevant to the aim based on the manipulation of the independent variable over a reasonable range and number of values. | | | | | |  | | |  | | |  |  | | |  | |
| Determines appropriate uncertainties in raw data. | | | | | |  | | |  | | |  |  | | |  | |
| Uses graphical analysis, including a consideration of uncertainties, to determine the equation of the relationship/value of the physics quantity. | | | | | |  | | |  | | |  |  | | |  | |
| Provides a conclusion that states the equation of the relationship/value of the physics quantity as determined from the graph and includes a comparison with the physics theory. | | | | | |  | | |  | | |  |  | | |  | |
| Describes the control of other variable(s) that could significantly affect the results and uses techniques to improve the accuracy of measurements. | | | | | |  | | |  | | |  |  | | |  | |
| Determines uncertainties in one of the variables expressed in the graphical analysis. | | | | | |  | | |  | | |  |  | | |  | |
| Provides graphical analysis which expresses the uncertainty in the relationship consistent with the uncertainty in the data. | | | | | |  | | |  | | |  |  | | |  | |
| Provides a conclusion that makes a quantitative comparison between the physics theory and the relationship/quantity obtained from the experimental data which includes consideration of uncertainties. | | | | | |  | | |  | | |  |  | | |  | |
| Discuss issues critical to the investigation such as:   * the other variable(s) that could have changed and significantly affected the results, and how they could have changed the results * the limitations to the theory’s applicability both in the practical situation and/or at extreme values of the independent variable   any unexpected outcomes of the processing of the results and a suggestion of how they could have been caused and the effect they had on the validity of the conclusion. | | | | | |  | | |  | | |  |  | | |  | |
|  | | | | |  | |  | | |  | | |  | | |  | |
| **Sufficiency statement** | | | | | | | | | | | | | **Internal Verification** | | | | |
| Achievement | All of A is required | | | | | | | | | | | | Assessor: Date: | | | | |
| Merit | All of A and M is required | | | | | | | | | | | | Verifier: Date: | | | | |
| Excellence | All of A, M and E is required | | | | | | | | | | | | Verifier’s school: | | | | |
| MARK OVERALL GRADE | | | N | A | | | | M | | | E | | Comments: | | | | |

For the purpose of national external moderation:

* only six WORD templates are required where available
* samples are not required to be randomly selected
* there should be one each of N, A, M, E and up to 2 others
* descriptions of evidence and explanations of judgements are not required for all other students, and a spreadsheet may be used.