DEAKIN COLLEGE
in association with
DEAKIN UNIVERSITY

Experimental Demonstration

Marking Rubric Student names:

	Below expectations	Meets expectations	Exceeds expectations	Mark
Video: Introduction	Introduction is not included or is scientifically inaccurate. 0	Introduction includes introducing your team and experiment you will perform (0.5 marks). Introduction is scientifically accurate (0.5 marks). 1		
	Introduction is not included or is poorly explained. 0	Introduction is well explained. 1		
Video: Safety precautions taken to perform the experiment	No safety precautions are highlighted. 0	Safety precautions are highlighted. 1		
	No safety precautions heeded during experimental demonstration. 0	Safety precautions are heeded during experimental demonstration. 1		
Video: Application of physics principles The principle(s) must be related to SLE123	Physics principles are discussed in a way that demonstrates some degree of understanding, however, there are significant aspects that are discussed incorrectly or inaccurately. 0	A basic grasp of physics principle(s) is/are conveyed (1 mark). Some aspects of the theory or experiment discussed incorrectly or misleadingly. Some information is inaccurate, incomplete, and not concise. 2	Physics principle(s) are clearly and correctly explained (2 marks). Information is accurate (1 mark), complete (0.5 marks), and concise (0.5 marks). 4	
Video: Use of physics terminology .	Use of physics vocabulary is inappropriate for the audience. 0	Use of physics vocabulary is appropriate for the audience. 2		
Video: Experimental Equipment	Experimental demonstration equipment not highlighted. 0	Equipment highlighted and explained. 1		

Video: Experimental design	Experimental demonstration design does not appear to have been well thought out. 0	Design displays basic understanding of scientific process but lacks understanding of obvious variables. 1	Design displays a good understanding of scientific process (1 mark) and understanding of obvious variables (1 mark). 2	
Video: Data collection	No data has been collected or data has been collected incorrectly. 0	Experiment performed adequately (0.5 marks). Data was recorded in a manner that may represents the results of the experiment (0.5 marks). 1	Experiment well performed (1 mark). Data collected and recorded in an orderly manner that accurately reflects the results of the experiment (1 mark). 2	
Video: Experimental outcome	Data analysis not performed. Outcome/result not clearly observed and/or did not correspond to the physics principle(s) stated. 0	Some data analysis (0.5 marks). Accurate outcome/result observed, corresponding to the physics principle stated (0.5 marks). 1	All data analysed (1 mark). Accurate outcome/result clearly observed, highlighting the physics principle(s) stated (1 mark). 2	
	Below expectations	**Meets expectations**	**Exceeds expectations**	**Mark**
Video: Link to biology An explanation on how the chosen experiment links to biology	No link to biology or poor interpretation. Tenuous link demonstrates basic understanding, however, there remain significant aspects that are discussed incorrectly or inaccurately, or missing key information (information provided is too basic). 0	Reasonable attempt to link the experiment and physics principles to the biological concepts (0.5 marks). Some aspects discussed incorrectly or inaccurately, or missing key information. Some information is inaccurate, unclear, or not concise. 2	Physics principle(s) are clearly and correctly linked to biological concepts (1 mark). Demonstrated high level understanding of scientific concepts (1 mark). Information is accurate (1 mark) and concise (1 mark). 4	
Video: Use of biology terminology	Use of biology vocabulary is inappropriate for the audience. 0	Use of biology vocabulary is appropriate for the audience. 1		
Video: Presentation	Narrator does not present freely throughout the demonstration (reading from a script). Delivery interferes with ability to understand the demonstration. Words often aren't clear, and pacing makes it difficult to follow the demonstration. Grammatical	Narrator presents freely but overall appears unprepared. Delivery is inconsistent throughout demonstration (0.5 marks). Words aren't always clear and/or pacing is uneven. Correct grammar is mostly used in the demonstration. The graphics/visuals are	Narrator presents freely and demonstrates a well prepared presentation . Correct grammar is consistently used throughout presentation (1 mark). The graphics and images are scientifically accurate (1 mark).	

	mistakes interfere with ability to understand the demonstration. The graphics/visuals distract from the scientific content. 0	somewhat helpful in communicating the content (0.5 marks). 1	2	
Video: Duration	Either over 5 minutes or under 3 minutes 0	4 -5 minutes. 1	3 – 4 minutes. 2	
Video: On screen	Some team members not seen on camera (together or individually). **Deduct 5**	All students seen on camera (together or individually). **No marks deducted**		
Report: claim or Conclusion. The identification of the claim or conclusion is assessed here.	Claim or conclusion about the results on an investigation is not stated. 0	Claim or conclusion about the results on an investigation lacks clarity. [It should describe the relationship between dependent and independent variables] 1	Claim or conclusion about the results on an investigation is clearly stated. [It should describe the relationship between dependent and independent variables] 2	
Report: evidence. The identification of the evidence is assessed here.	Data used as evidence to support the claim is either not identified or is unclearly and incorrectly stated. 0	Data used as evidence to support the claim is either unclear or incorrect [Evidence is the scientific data used to support the claim and can be qualitative, quantitative, or a combination of both] 1	Data used as evidence to support the claim is clearly and correctly stated. [Evidence is the scientific data used to support the claim and can be qualitative, quantitative, or a combination of both] 2	

	Below expectations	**Meets expectations**	**Exceeds expectations**	**Mark**
Report: reasoning	Reasoning of relevant scientific principle(s) that are important to claim and evidence, is either not stated or both unclearly and incorrectly identified. 0	Reasoning of relevant scientific principle(s) that are important to claim and evidence, is either unclearly or incorrectly stated. [Reasoning shows how or why the data count as evidence to support the claim.] 1	Reasoning of relevant scientific principle(s) that are important to claim and evidence, is both clearly (1 mark) and correctly Stated (1 mark). [Reasoning shows how or why the data count as evidence to support the claim.] 2	

Report: independent variable(s)	Independent variable(s) are either not identified or incorrectly identified. 0	Independent variable(s) are correctly identified. 2		
Report: dependent variable(s)	Dependent variable(s) are either not identified or incorrectly identified. 0	Dependent variable(s) are correctly identified. 1		
	Dependent variable(s) are either not explained or incorrectly explained. 0	Dependent variable(s) are correctly explained. 1		
Report: controlled variable(s)	Controlled variable(s) are either not identified or incorrectly identified. 0	Controlled variable(s) are correctly identified. 1		
	Controlled variable(s) are either not explained or incorrectly explained. 0	Controlled variable(s) are correctly explained. 1		
Report: References	References are not listed or are mostly irrelevant to the report submitted. 0	References are mostly relevant to the report submitted. 1		
	Incorrect referencing style used. 0	Correct referencing style used. 1		
	Inappropriate references used (e.g., lecture notes and websites). **Deduct 5**	Appropriate references used.		
			Total (out of 40)	