

Please read the instructions printed at the end of this form. **One** of these sheets, suitably completed, should be attached to the assessed work of **each** candidate.

Unit Title	Electrons in Action	Unit Code	G631	Session	Jan / June	Year	2	0		
Centre Name						Centre Number				
Candidate Name						Candidate Number				

Evidence: The candidate needs to produce evidence of their investigation into the principles and applications of electrochemical changes

Criteria			Teacher Comment	Mark	Page No.
<p>AO1(a).1: Candidate will demonstrate a basic knowledge and understanding of the principles of electrochemical change as outlined in the specifications;</p> <p>candidate will give at least two examples of the applications of electrochemical change; candidate will use corrected scientific terminology and conventions;</p> <p style="text-align: right;">[0 1]</p>	<p>AO1(a).2: candidate will demonstrate a sound knowledge and understanding of the principles of electrochemical change as outlined in the specifications;</p> <p>candidate will give a range of examples of the applications of electrochemical change; candidate will give clear explanations and use correct scientific terminology and conventions;</p> <p style="text-align: right;">[2 3]</p>	<p>AO1(a).3: candidate will demonstrate a thorough knowledge and understanding of the principles of electrochemical change as outlined in the specifications;</p> <p>candidate will give a wide range of examples of the applications of electrochemical change;</p> <p>candidate will give clear explanations and use correct scientific terminology and conventions appropriately</p> <p style="text-align: right;">[4 5]</p>			
<p>AO1(b).1: Candidate will research the application of electrochemical changes in the production of</p> <ul style="list-style-type: none"> • an electric current • metals; <p>information will have been selected and presented clearly with evidence of corrected punctuation and grammar;</p> <p style="text-align: right;">[0 1]</p>	<p>AO1(b).2: candidate will research the application of electrochemical changes in the production of</p> <ul style="list-style-type: none"> • an electric current • metals • giving a range of examples; <p>information will have been selected, explained and presented clearly with spelling, punctuation and grammar mainly used correctly;</p> <p style="text-align: right;">[2 3]</p>	<p>AO1(b).3: candidate will research the application of electrochemical changes in the production of</p> <ul style="list-style-type: none"> • an electric current • metals • giving a wide range of examples; <p>information will have been selected, explained and presented clearly with correct use of spelling, punctuation and grammar throughout.</p> <p style="text-align: right;">[4 5]</p>			

Criteria			Teacher Comment	Mark	Page No.
<p>AO2(a).1: Candidate will research two types of commercial cells, giving at least one example for each type; candidate will compare the cells for</p> <ul style="list-style-type: none"> • construction and method of producing an electric current • resources used in production • efficiency • safety and environmental effect • sustainability • use; <p>information will be presented clearly;</p> <p style="text-align: right;">[0 1 2 3 4]</p>	<p>AO2(a).2: candidate will research three types of commercial cells and give at least one example for each type; candidate will compare the cells for</p> <ul style="list-style-type: none"> • construction and method of producing an electric current • resources used in production • efficiency • safety and environmental effect • sustainability • use; <p>information will be explained and presented clearly;</p> <p style="text-align: right;">[5 6]</p>	<p>AO2(a).3: candidate will research commercial cells and give at least one example for a wide range of cells;</p> <p>candidate will compare the cells for</p> <ul style="list-style-type: none"> • construction and method of producing an electric current • resources used in production • efficiency • safety and environmental effect • sustainability • use; <p>information will be explained in detail and presented clearly.</p> <p style="text-align: right;">[7 8]</p>			
<p>AO2(b).1: Candidate will carry out some straightforward calculations of</p> <ul style="list-style-type: none"> • emf of cells • quantity of charge; <p>candidate will research and use data to compare the efficiency of commercial cells;</p> <p style="text-align: right;">[0 1 2]</p>	<p>AO2(b).2: candidate will carry out calculations of</p> <ul style="list-style-type: none"> • emf of cells • quantity of charge • mass of products; <p>candidate will research and use data to compare the efficiency of commercial cells; candidate will obtain correct solutions;</p> <p style="text-align: right;">[3 4]</p>	<p>AO2(b).3: candidate will carry out complex calculations of</p> <ul style="list-style-type: none"> • emf of cells • quantity of charge • mass of products; <p>candidate will research and use data to compare the efficiency of commercial cells;</p> <p>candidate will obtain correct solutions to the appropriate degree of accuracy.</p> <p style="text-align: right;">[5 6]</p>			

<p>AO3(a).1: Candidate will plan suitable experiments to investigate the effect of changing one condition on</p> <ul style="list-style-type: none"> • emf of a cell • mass of copper deposited during electrolysis; <p>there will be evidence of the use of a risk assessment;</p> <p style="text-align: right;">[0 1 2 3 4]</p>	<p>AO3(a).2: candidate will plan suitable experiments to investigate the effect of changing conditions on</p> <ul style="list-style-type: none"> • emf of a cell • mass of copper deposited during electrolysis; <p>candidate will produce risk assessments consistent with COSHH guidelines;</p> <p>candidate will work with an appropriate degree of accuracy;</p> <p style="text-align: right;">[5 6]</p>	<p>AO3(a).3: candidate will plan suitable experiments to investigate the effect of changing a wide range of conditions on</p> <ul style="list-style-type: none"> • emf of a cell • mass of copper deposited during electrolysis; <p>one of the changes in conditions should show no effect;</p> <p>candidate will produce detailed risk assessments consistent with COSHH guidelines;</p> <p>candidate will work with an appropriate degree of accuracy and candidate will explain any practical techniques that will improve results.</p> <p style="text-align: right;">[7 8]</p>			
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Criteria					Teacher Comments	Mark	Page No.
AO3(b).1: Candidate will make and record relevant observations and measurements for both experiments; the data will be displayed clearly; [0 1 2 3 4]	AO3(b).2: candidate will make and record relevant observations and measurements for both experiments; the measurements will be recorded to the appropriate degree of accuracy and the data will be displayed clearly; [5 6]	AO3(b).3: candidate will make and record relevant observations and measurements for both experiments; the measurements will be recorded to the appropriate degree of accuracy and the data will be displayed clearly and used in appropriate calculations. [7 8 9]					
AO3(c).1: Candidate will try to interpret the results for both experiments; [0 1 2]	AO3(c).2: candidate will interpret the results and draw basic conclusions for both experiments; candidate will evaluate the procedures; [3 4 5 6]	AO3(c).3: candidate will interpret the results in detail and draw conclusions for both experiments; candidate will evaluate the procedures and suggest alternatives. [7 8 9]					
					Total/50		
If this work is a re-sit, please tick	Session and Year of previous submission	Jan / June	2	0	Please tick to indicate this work has been standardised internally		

Please note: This form may be updated on an annual basis. The current version of this form will be available on the OCR website (www.ocr.org.uk).
A completed Centre Authentication form CCS160 **must** accompany the MS1 when it is sent to the moderator.

Guidance on Completion of this Form

- 1 **One** sheet should be used for each candidate.
- 2 Please ensure that the appropriate boxes at the top of the form are completed.
- 3 Please enter *specific* page numbers where evidence can be found in the portfolio, and where possible, indicate to which part of the text in the mark band the evidence relates.
- 4 Circle the mark awarded for each strand of the marking criteria in the appropriate box and also enter the circled mark in the final column.
- 5 Add the marks for the strands together to give a total out of 50. Enter this total in the relevant box.