

Williamwood High School Chemistry Department

Prior to the moderation exercise, please complete the following information and submit it to your facilitator with assessment evidence from one learner that you judge to have successfully attained the Es' and Os'.

Experiences and Outcomes:

SCN 3-15b

Having **contributed** to a variety of practical activities to make and break down compounds. I can **describe** examples of how properties of compounds are different from their constituent elements.

Lit 3.28 a

I can convey information, **describe** events, **explain** processes or concepts, and combine ideas in different ways.

Learning Intentions:

Language used below was closely linked to the language of the E's and O's

- I am learning to **describe** the properties of ionic substances.
- I am learning to **contribute** to the planning of an investigation of electrolysis on an ionic substance.
- I am learning to **describe** and **explain** the changes that may be observed as a result of this experiment.
- I am learning to **convey the information** gathered in the form of a scientific report.

Success Criteria which was shared by the learner.

Success Criteria

- I can plan and carry out an electrolysis experiment.
- I can carry out this experiment safely and effectively.
- I can recognise and record observations/results accurately.
- I can write a scientific report which explains the experimental process and reports my findings
- I can use the term electrolysis accurately
- I can deliver an oral presentation explaining my prediction of electrolysis in an unfamiliar context.

Briefly outline the context and range of quality learning experiences that have been provided making reference to the chosen design principles.

PERSONALISATION & CHOICE, COHERENCE ,RELEVANCE ,CHALLENGE & ENJOYMENT, BREADTH ,PROGRESSION ,DEPTH

Lesson 1 : RELEVANCE ; BREADTH ; DEPTH

Revision of what a compound is and more specifically an ionic compound. Use prior knowledge to revise where you would find metals and non-metals on the periodic table.

Look at differences between compounds and the elements that make them up.

Use of visual aids : Iron, sulphur and iron sulphide

Show pupils the apparatus available to plan an electrolysis experiment..

Work in pairs to plan the investigation.

Successfully and safely set up the apparatus in a working system.

Observe and record results accurately.

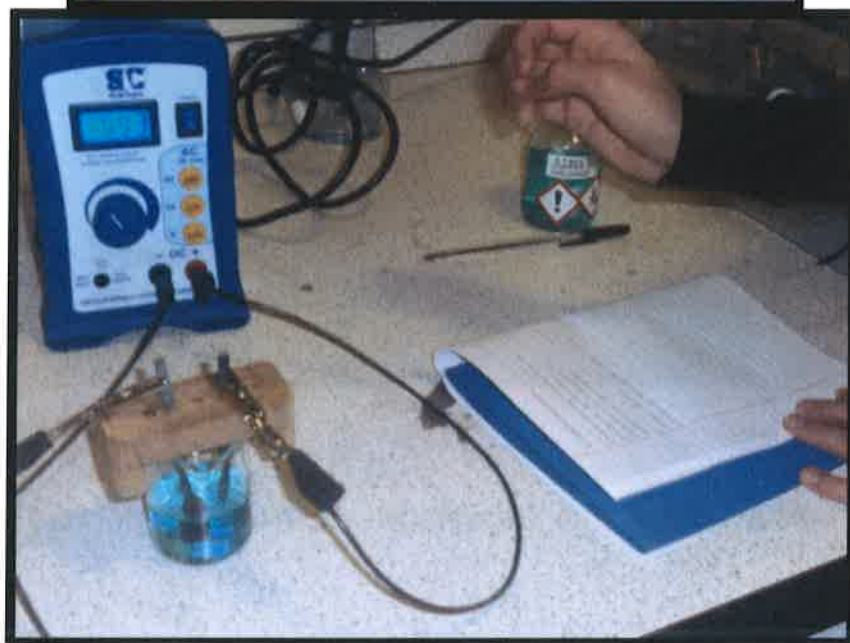
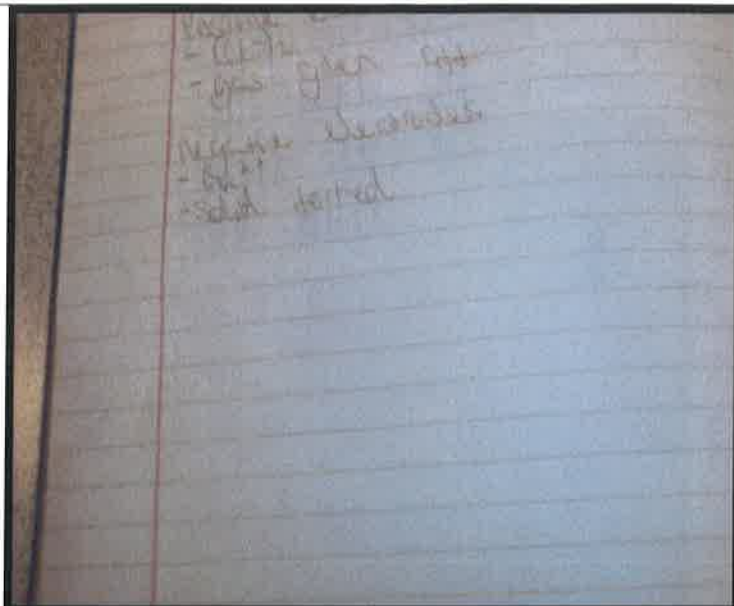
Evidence Gathered

Pupils record of results in jotter.

Photograph of the experimental apparatus and resources organised by pupils.

Photographs





Lesson 2 : COHERENCE ,RELEVANCE ,CHALLENGE &ENJOYMENT AND BREADTH

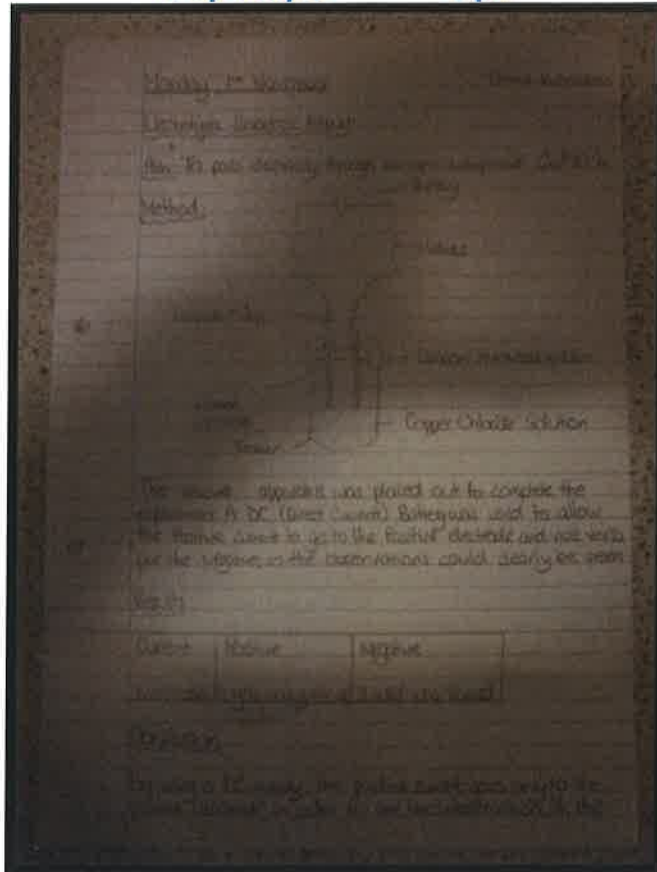
- I am learning to describe and explain the changes that may be observed as a result of this experiment.
- I am learning to convey the information gathered in the form of a scientific report.

Pupils can write a scientific report which explains the experimental process and report their findings :

Including: Aim, method (diagram), results, conclusion and evaluation of experimental procedures.

EVIDENCE GATHERED

Pupil report transcript.

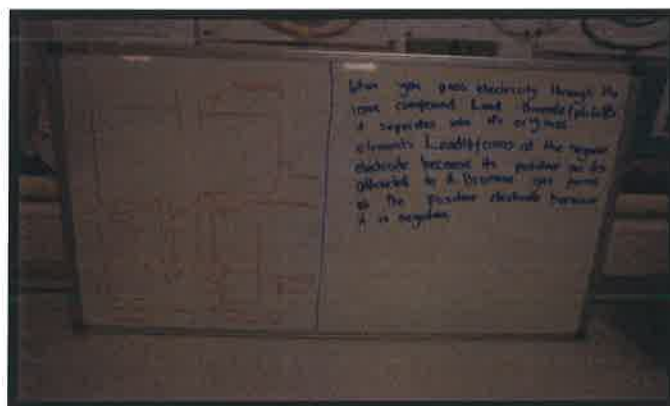


Lesson 3: CONCLUSION

- Pupils will deliver an oral presentation explaining their prediction of electrolysis in an unfamiliar context.

Evidence Gathered

Pupils worked in pairs to predict the results of another electrolysis experiment. They placed their findings on a show me board and they were also filmed presenting their findings.



Record the range of assessment evidence that was gathered to meet the success criteria (Say, Write, Make, and Do) considering breadth, challenge and application.

SAY:

- Made valid suggestions for the way in which the apparatus should be set up to successfully break down the compound copper chloride into copper and chlorine, using electrolysis.
- Make observations orally at what was found at the negative and positive electrodes.
- Use the term electrolysis correctly
- Oral presentation in unfamiliar context

WRITE:

- Record observations in their jotter.
- Write a lab report : Aim, method, results, conclusion and evaluation.

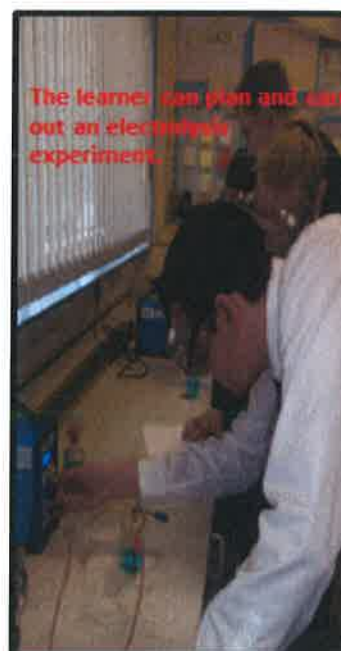
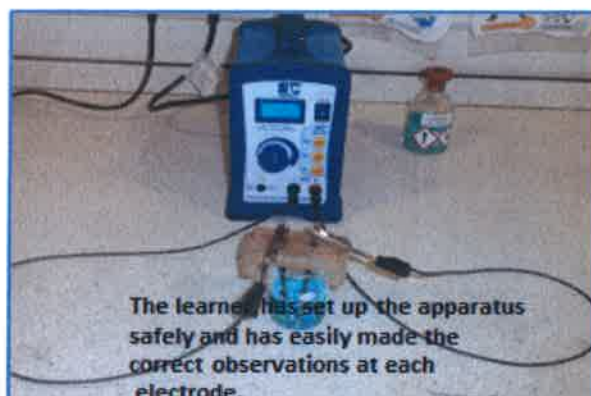
DO:

- Successfully participate in practical work.
- Demonstrate skills of working in groups and taking responsibility for learning

Briefly outline the oral/written feedback given to the pupil on progress and next steps, referring to the learning intention and success criteria.

- The following written feedback was given to the pupil using the photographs as evidence.
 - **I can plan and carry out an electrolysis experiment.**
 - **I can carry out this experiment safely and effectively.**

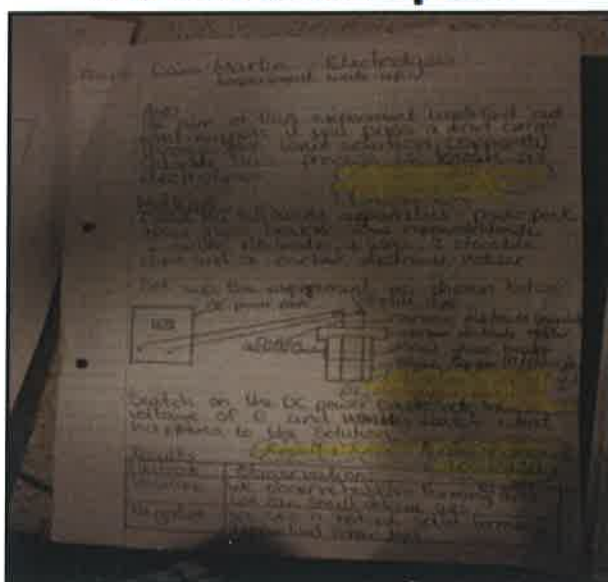
Example



The following written feedback was also given:

- I can recognise and record observations/results accurately.
- I can write a scientific report which explains the experimental process and reports my findings
- I can use the term electrolysis accurately

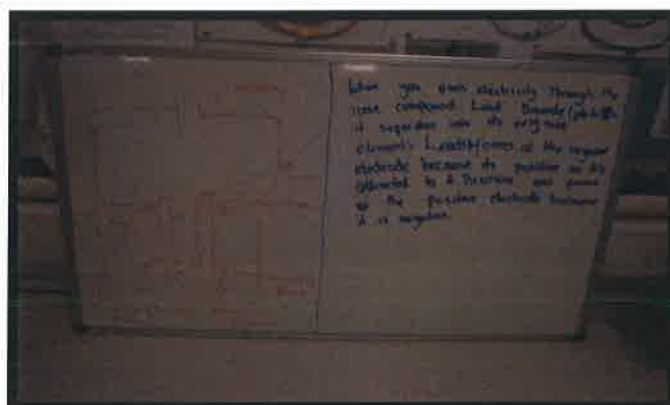
Annotated report



This pupil did not mention the definition of electrolysis in this report. However, was asked on the spot and orally gave an exceptional answer. It was clear that his pupil understood what was meant by electrolysis.

The children delivering this presentation were assessed by their peers using the faculty presentation criteria.

Their feedback was:



Peer feedback :

Understanding was demonstrated. The presentation aids were clear but not totally accurate. They were confident in their understanding. They had prepared and had listened to each other.

Pupil Voice:

What have you learned? How did you learn? What skills have you developed?

'Liked using the apparatus'.

'I enjoyed choosing my own method rather than following the commands of the teacher.'

'I know more about electrolysis and how to draw it up. But I still find it hard to understand.'

'Next time I would like to make a poster on what I was learning about.'

Did the learner successfully attain the outcomes? **YES/NO**

After the department moderation exercise it was agreed that this pupil had achieved level 3.

This was only one or three assessment activities to be completed by the pupil.



Learner Evidence

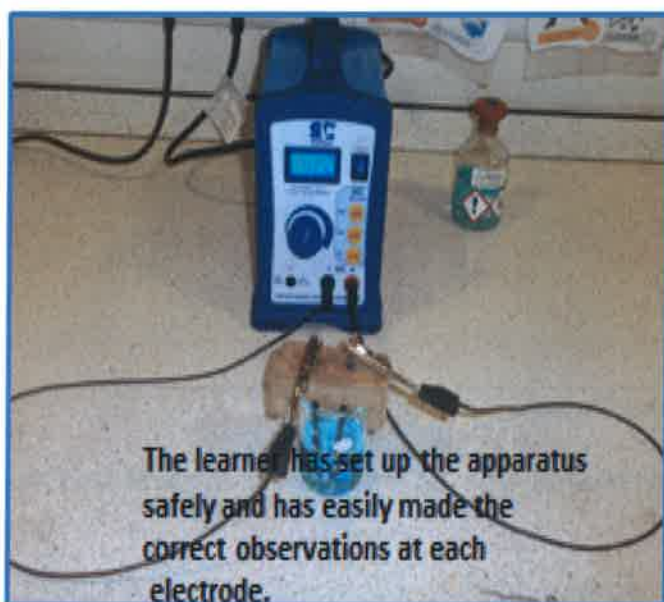
Lesson 1

Class teacher annotated photo evidence

Success Criteria

- I can plan and carry out an electrolysis experiment.
I can carry out this experiment safely and effectively.

Example



○

Learner Evidence

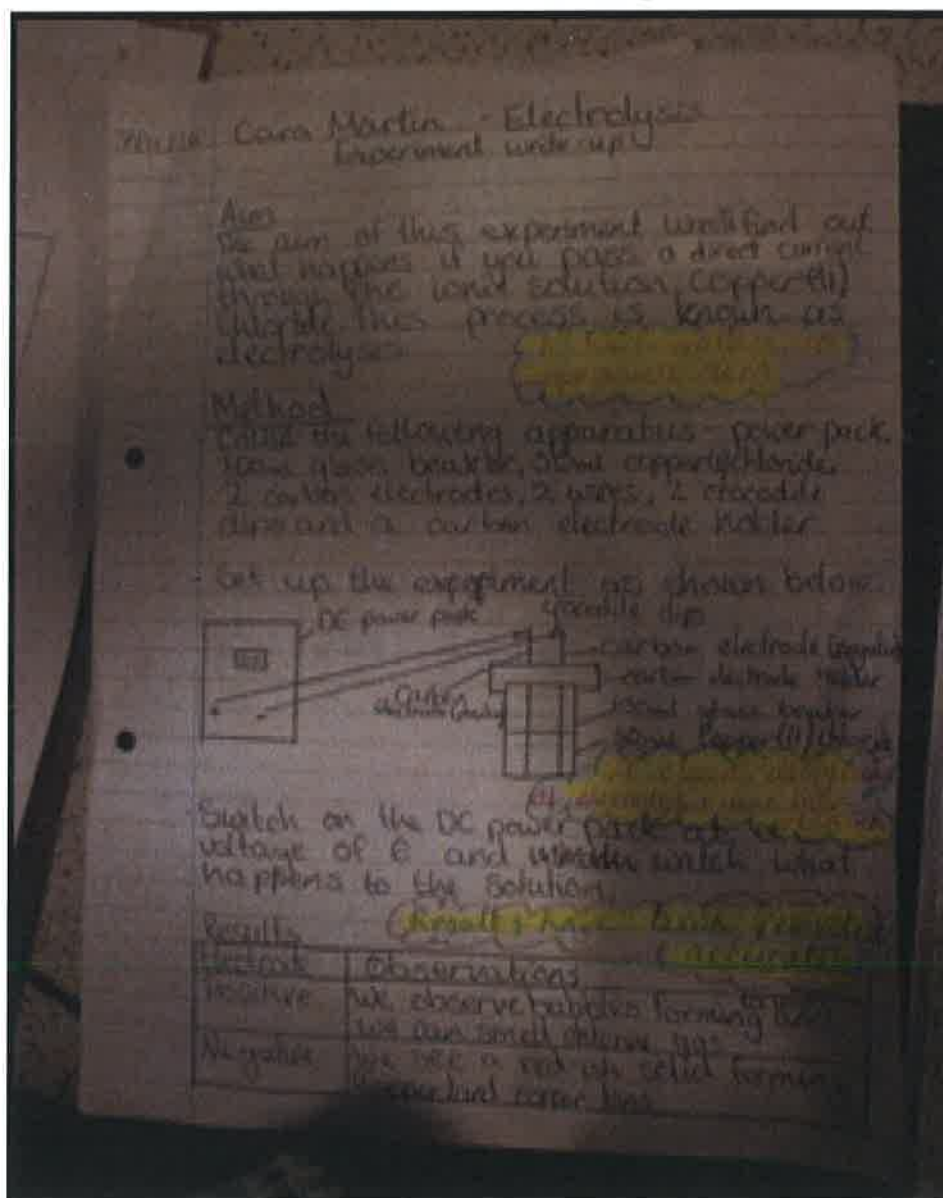
Lesson 2

Class teacher annotated written report

Success Criteria

- I can recognise and record observations/results accurately.
- I can write a scientific report which explains the experimental process and reports my findings
- I can use the term electrolysis accurately

Annotated report



Learner Evidence

Lesson 3

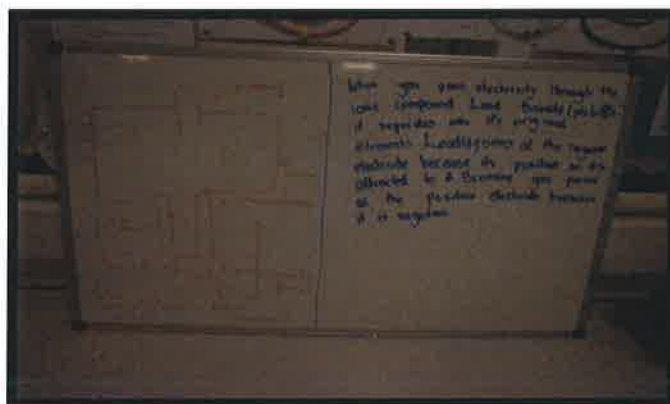
Photograph taken of visual aid used in oral presentation. Pupils were filmed. Peers assessed their knowledge. Feedback given below:

Success Criteria

- Pupils will deliver an oral presentation explaining their prediction of electrolysis in an unfamiliar context.

The children delivering this presentation were assessed by their peers using the faculty presentation criteria.

Their feedback was:



Peer feedback:

Understanding was demonstrated. The presentation aids were clear but not totally accurate. They were confident in their understanding. They had prepared and had listened to each other.

S3 Assessed Practical Questions

Name [REDACTED] Class 3PQ Mark /4

Using your knowledge of electrolysis complete the ion - electron half equations for the examples below:

1. If Lead (II) Iodide was electrolysed:

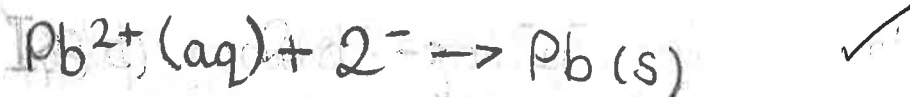
Positive electrode



group delivered presentation well

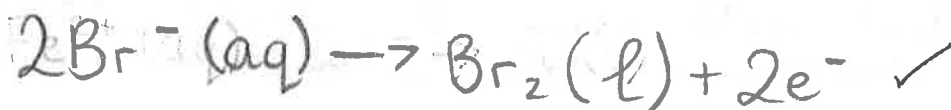


Negative Electrode



2. If Iron (II) Bromide was electrolysed:

Positive electrode



Negative Electrode



Chemical Changes and Structure

S3 Assessed Practical and Report write-up

Marking Sheet

	Total mark = 10	Mark Awarded
1. I can carry out an electrolysis experiment safely.	Mark 1/0	Rona did this well (1)
2. I can recognise and record observation/results accurately.	Mark 1/0	(1)
3. I can write a scientific report which explains the experimental process and reports my findings.	Mark 3 - Good report 2 - Fair report 1 - Poor report	(3) A good report has been written
4. I can use the term electrolysis accurately.	Mark (1/0)	Although this was not written in report
5. I can deliver an oral or written presentation explaining my prediction of electrolysis in an unfamiliar context.	Mark 1/0 (3)	Rona was asked the definition & it was clear she understood

* Rona participated with her team to complete and explain electrolysis in unknown situations.

Total 9.5 / 10

explanations not totally accurate 3/4

7/11/17

Assessed Practical
Rona Easton

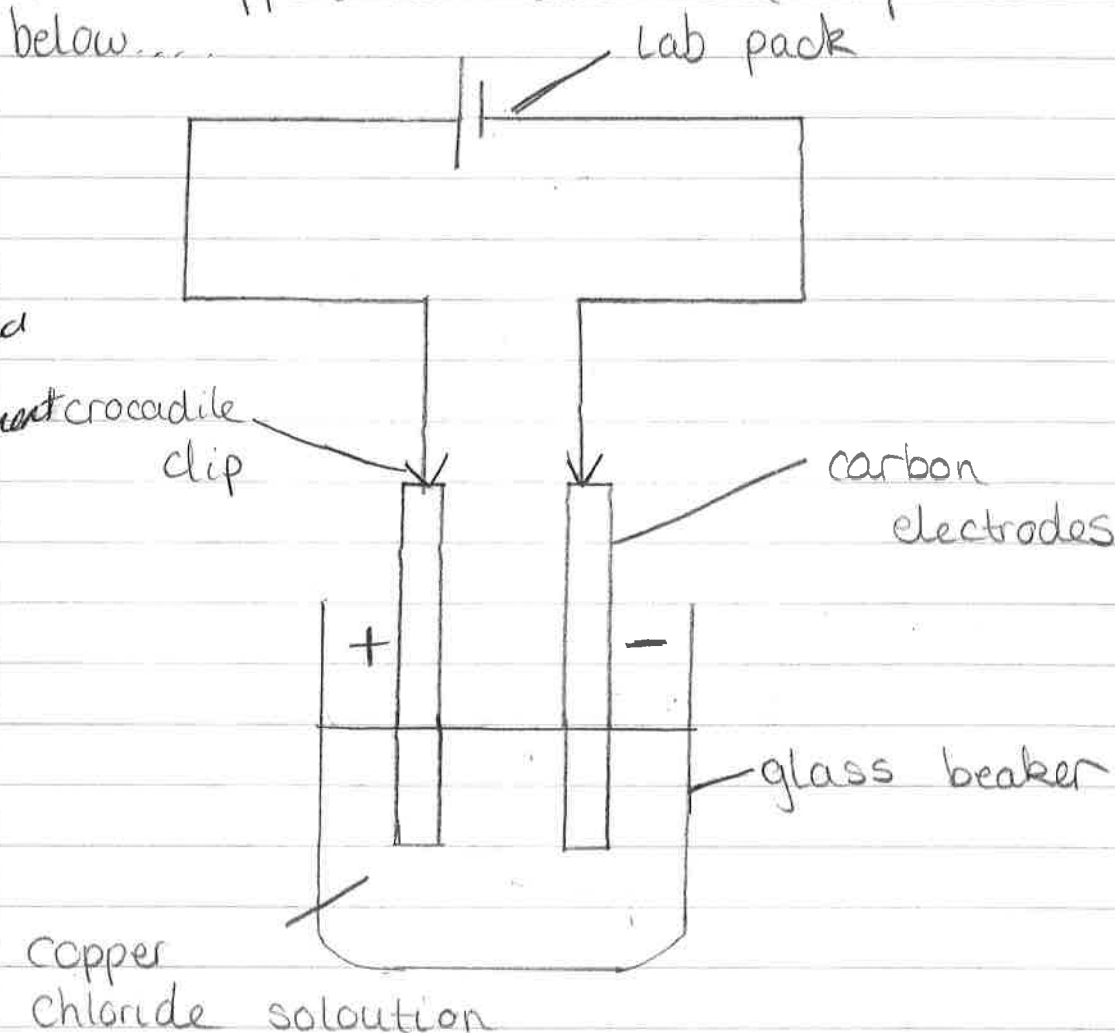
Pupit has

planned experiment
& written an appropriate

Aim - My aim was to electrolyse copper chloride. Electrolysis is the separation of an ionic compound using electricity.

Method - The apparatus was set up as below...

✓ Rona carried out experiment safely



* The lab pack should be set to DC (direct current) and 6 volts.

Results - In my results, I found out that a gas was being produced at the positive

Results
accurate

electrode. This gas is chlorine and was attracted to the positive electrode because it is negatively charged. At the negative electrode, a red substance was gathering around it. This metal is copper and was attracted to the negative electrode because it is positively charged.

Conclusion- In conclusion, our experiment was successful and we managed to separate the copper chloride using electrolysis.



I know my experiment was successful because I could smell the chlorine and I could see the gas bubbles being produced. I could see the copper gathering around the electrode.

evaluation- I think I set up everything safely and correctly. Although, I left the experiment running too long and my solution (which should have stayed blue) turned black and I could no longer see the electrodes.