Marietta City Schools

2024–2025 District Unit Planner

Teacher(s)	IB Chemistry PLC	**Subject Group and Course**	Group 4 - Chemistry		
Course Part and Topic	**UNIT 3 - THE INTERNAL ASSESSMENT**	**SL or HL / Year 1 or 2**	SL Year 2	**Dates**	Ongoing through Semesters 1 and 2 (9 weeks total)
Unit Description and Texts		**DP Assessment(s) for Unit**			
Resources for 2025 "New" Syllabus ● Brown et al. *Pearson Baccalaureate Standard Level Chemistry*, 3rd edition ● Bylikin et al. *Oxford IB Diploma Programme: Chemistry Course Companion*, 2023 edition. ● Talbot et al. *Chemistry for the IB Diploma Programme*, 3rd edition. ● IB Chemistry Guide First Assessment 2025 ● InThinking IB subject site for Chemistry ● IB Chemistry Schoology Course Resources for 2016 "Old" Syllabus ● Murphy et al. *Oxford IB Diploma Programme: Chemistry Course Companion*, 2014 edition. ● Brown and Ford. *Pearson Baccalaureate Standard Level Chemistry*, 2nd edition. ● Hodder Study and Revision Guide for the IB Diploma ● Hodder IA Internal Assessment for Chemistry		The internal assessment, worth 20% of the final IB grade, consists of an individual investigation that will cover a topic from IB Chemistry Standard Level. Student work is internally marked by the teacher and externally moderated by the IB. ● Duration: 10 hours ● Weighting: 20% ● Individual investigation **Internal Assessment Criteria** Research design 25% Data analysis 25% Conclusion 25% Evaluation 25% **Note: The Collaborative Sciences Project (CSP) will be completed during the first semester of this course.		

INQUIRY: establishing the purpose of the unit

Transfer Goals *List here one to three big, overarching, long-term goals for this unit. Transfer goals are the major goals that ask students to "transfer" or apply their knowledge, skills, and concepts at the end of the unit under new/different circumstances, and on their own without scaffolding from the teacher.*
Based on the four Internal Assessment criteria: 1. **Students can** effectively communicate the methodology (purpose and practice) used to address their individualized research question. 2. **Students can** record, process and present the data in ways that are relevant to their individualized research question. 3. **Students can** successfully answer their research question with regard to their analysis and the accepted scientific context. 4. **Students can** evaluate their investigation methodology and suggest improvements.

ACTION: teaching and learning through inquiry

Content / Skills / Concepts - Essential Understandings	**Learning Process** *Check the boxes for any pedagogical approaches used during the unit. Aim for a variety of approaches to help facilitate learning.*
RESEARCH DESIGN (25% of total marks) This criterion assesses the extent to which the student effectively communicates the methodology (purpose and practice) used to address the research question. ● The Research Question should provide specific and appropriate context for the investigation. ● In the methodological considerations, the student should describe how the chosen data collection methods allows them to answer the research question. The methodology used should be realistic in terms of the time and resources available. It must also be possible to effectively control variables that impact the results. ● The student should present the description of the methodology clearly such that it could be easily reproduced.	Learning experiences and strategies/planning for self-supporting learning: □ Lecture □ Socratic seminar ☒ Small group/pair work □ PowerPoint lecture/notes □ Individual presentations

DATA ANALYSIS (25% of total marks)

This criterion assesses the extent to which the student's report provides evidence that the student has recorded, processed and presented the data in ways that are relevant to the research question.

Communication is essential when addressing this criterion. The student must follow these rules:

- Present clear tables and graphs with adequate titles
- Produce well designed tables that allow easy comparison of data
- Include the uncertainties of the instruments used
- Use correct symbols for physical quantities and their units
- Show processing (calculations) clearly but do not add unnecessary steps and descriptions
- Report decimal places consistently
- Do not use images to replace qualitative data
- Make sure that raw data, not inferences, are reported
- Conduct repeats for any trials where results are inconsistent

CONCLUSION (25% of total marks)

This criterion assesses the extent to which the student successfully answers their research question with regard to their analysis and the accepted scientific context.

The conclusion for the investigation must:

- Present a conclusion that is relevant to the research question and justified by the data
- Include scientific context to support the conclusion

EVALUATION (25% of total marks)

This criterion assesses the extent to which the student's report provides evidence of evaluation of the investigation methodology and has suggested improvements.

The evaluation requires the student to:

- Identify methodological weaknesses and limitations
- Suggest realistic and relevant improvements, addressing previously identified weaknesses and limitations to the methodology

The methodology is assessed against this criterion, so any significant mistakes made in the design will affect the marks. Identifying issues at this stage that the student should have addressed previous to data collection will earn minimal credit. Suggestions such as "doing more trials" are too simple.

☒ Group presentations

☒ Student lecture/leading

□ Interdisciplinary learning

Details:

Students will learn through a combination of small group or individual lab work and teacher discussions.

□ Other(s):

Formative assessment(s):

Daily formative checks
Internal Assessment Proposal (Research Design)
Internal Assessment Rough Draft

Summative assessments:

Internal Assessment Final Draft - scored by teacher and moderated by IB in the spring

Differentiation:

☒ Affirm identity - build self-esteem

☒ Value prior knowledge

☒ Scaffold learning

☒ Extend learning

Details:

- *SWD/504 – Accommodations Provided*
- *ELL – Reading & Vocabulary Support*

	• *Intervention Support* • *Extensions – Enrichment Tasks and Project*

Approaches to Learning (ATL)

Check the boxes for any explicit approaches to learning connections made during the unit. For more information on ATL, please see the guide.

☒ Thinking

☒ Social

☒ Communication

☒ Self-management

☒ Research

Details:

Students will complete research for their investigation and potentially work in small groups.

Students will communicate their findings to their peers in the form of small-group presentations.

*Students **must** use self-management skills to complete work in a timely and accurate manner.*

Language and Learning *Check the boxes for any explicit language and learning connections made during the unit. For more information on the IB's approach to language and learning, please see the guide.*	**TOK Connections** *Check the boxes for any explicit TOK connections made during the unit*	**CAS Connections** *Check the boxes for any explicit CAS connections. If you check any of the boxes, provide a brief note in the "details" section explaining how students engaged in CAS for this unit.*
☒ Activating background knowledge	☒ Personal and shared knowledge	☒ Creativity

☒ Scaffolding for new learning ☒ Acquisition of new learning through practice ☒ Demonstrating proficiency Details: *Content and vocabulary introduced in previous science courses will be used in this unit.* *Students will acquire new vocabulary.* *Students will continually demonstrate proficiency with chemistry vocabulary in class discussions and group work.*	☒ Ways of knowing ☒ Areas of knowledge ☒ The knowledge framework Details: *All components of TOK are on display during the IA process.*	□ Activity □ Service Details: *Students are encouraged to be creative in their research design and completion of the IA.*

Resources

List and attach (if applicable) any resources used in this unit

Resources for 2025 "New" Syllabus

- Brown et al. *Pearson Baccalaureate Standard Level Chemistry*, 3rd edition
- Bylikin et al. *Oxford IB Diploma Programme: Chemistry Course Companion*, 2023 edition.
- Talbot et al. *Chemistry for the IB Diploma Programme*, 3rd edition.
- IB Chemistry Guide First Assessment 2025
- InThinking IB subject site for Chemistry
- IB Chemistry Schoology Course

Resources for 2016 "Old" Syllabus

- Murphy et al. *Oxford IB Diploma Programme: Chemistry Course Companion*, 2014 edition.
- Brown and Ford. *Pearson Baccalaureate Standard Level Chemistry*, 2nd edition.
- Hodder Study and Revision Guide for the IB Diploma
- Hodder IA Internal Assessment for Chemistry

REFLECTION: considering the planning, process, and impact of the inquiry

What worked well *List the portions of the unit (content, assessment, planning) that were successful*	What didn't work well *List the portions of the unit (content, assessment, planning) that were not as successful as hoped*	Notes / Changes / Suggestions *List any notes, suggestions, or considerations for the future teaching of this unit*
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