Marietta City Schools

2024–2025 District Unit 4 Planner

Teacher(s)	Thomas Shyamala	**Subject group and course**	IB Physics SL Y1		
Course part and topic	Internal Assessment Design Lab IB requirement for DP diploma	**SL or HL/Year 1 or 2**	Sl Y1	**Dates**	Proposal- Year 1 Experiment: 2 weeks in Y2 TBD Rough Draft: TBD Final draft TBD
Unit description and texts		**DP assessment(s) for unit**			
Students will develop and execute an individual research project. This is a requirement for the IB diploma.		• IA Proposal (Year 1) • IA Checkpoints (Year 2) • IA rough draft (Year 2) • IA final draft (Year 2)			

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.**
SWBAT: Investigate an identified physics related phenomenon using the following practices: • Asking Questions and Defining Problems • Developing & Using Models • Constructing Explanations

Students may use the following content from the course:

Topic A: Space, time and motion

Topic B: The particulate nature of matter

Topic C: Wave Behaviour

Topic D: Fields

Topic E: Nuclear and Quantum

Students will develop the following skills:

- Effectively develop research questions
- Devising reliable and valid methodology
- Effectively incorporate required safety and ethical guideline into experimentation
- Construct testable hypotheses
- Organize and analyze data using prescribed statistical tests

Students will grasp the following concepts

- Systems and Models
- Interactions and Equilibrium
- Stability and Change

ACTION: teaching and learning through inquiry

Formative assessment: Weekly online quizzes will be conducted to determine growth of learners throughout the unit. Internal Assessment (IA) rough draft

Summative assessment: Internal Assessment (IA) proposal and Internal Assessment final report

Differentiation:

- Affirm identity—build self-esteem
- Value prior knowledge
- Scaffold learning Extend learning

Details: Growth will be monitored using formative assessments by instructor and self-assessed using provided bulls-eye rubric. Remediation/ extension will be conducted through homework activities and investigations conducted in class.

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

Details:
Students will conduct their IA research project.

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 Scaffolding for new learning Acquisition of new learning through practice Demonstrating proficiency Details: This unit applies vocabulary acquired through previous courses. Proficiency will be assessed through formative and summative assessments.	Personal and shared knowledge Ways of knowing Areas of knowledge The knowledge framework Details: Natural science as an area of science will be investigated in this unit.	Creativity Activity Service Details: Development and execution of the Internal Assessment requires students to think creatively. The work may not be applied to CAS projects but skills developed could be used on developing CAS activities.

Resources

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

- IB Physics Schoology Page

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