Curriculum Analysis Grid: Form 1 Physics Term 3

Level: Form 1
Subjects: Physics
Curriculum Philosophy and Goals:
The Competence-Based Curriculum fosters scientific competence, critical thinking, and practical skills to prepare learners for understanding and applying Physics in everyday life and emerging technologies. The goals include equipping learners with skills in observation, experimentation, and problem-solving in Physics, developing the ability to analyze and interpret physical phenomena, and promoting hands-on skills and real-world application of Physics concepts.

Topic	Sub Topic	Prescribed Competences	Key Concepts and Content	Learning Strategies	Assessment	Learning Environment	Material Development	Structure of Materials	Teacher Status
Mechanics 1	1.1 Forces	Scientific Competence, Critical Thinking	- Types of forces (gravity, friction, tension) - Effects of forces	- Group experiments on force effects - Drawing force diagrams - Peer discussion	Formative: 1. Experiment report (10 marks) Summative: 1. Force test (20 marks)	Laboratory for experiments, classroom with discussion spaces, diagram-drawing areas	- Springs, weights, rulers - Charts on force types - Handouts on force effects	- Charts: Diagrams of force types and effects - Handouts: Experiment report templates - Diagram templates: Force	Teachers should be skilled in force concepts, experimental design, and discussion facilitation. Current status: Trained in Competence-Based

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								diagram outlines	Curriculum delivery.
Mechanics 1	1.2 Circular Motion	Scientific Competence, Analytical Thinking	- Centripetal force - Examples in daily life	- Observing circular motion demos - Calculating centripetal force - Group analysis	Formative: 1. Group analysis (10 marks) Summative: 1. Motion test (25 marks)	Laboratory for demonstrations, classroom with calculators, group analysis spaces	- Rotating objects (e.g., string and weight) - Calculators for computations - Charts on circular motion	- Charts: Visuals of centripetal force - Calculation guides: Centripetal force formulas - Demo guides: Step-by-step demonstration instructions	Teachers need expertise in circular motion, calculation instruction, and group analysis. Current status: Proficient in demonstration-based teaching.
Mechanics 1	1.3 Moment of a Force	Scientific Competence, Practical Skills	- Definition of moment - Lever principle	- Practical with levers and weights - Solving	Formative: 1. Peer review task (10 marks) Summative:	Laboratory for lever experiments, classroom with	- Levers, weights - Charts on moment	- Charts: Lever and moment diagrams	Teachers require skills in moment calculations,

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				moment problems - Peer review	1. Moment test (25 marks)	problem-solving spaces, peer review areas	principles - Handouts on moment problems	- Handouts: Moment calculation templates - Review guides: Peer feedback formats	practical experiments, and peer review facilitation. Current status: Experienced in hands-on instruction.
Mechanics 1	1.4 Additional Sub-topic (Simple Mechanisms)	Scientific Competence, Critical Thinking	- Simple machines (pulley, inclined plane) - Mechanical advantage	- Building simple machines - Analyzing efficiency - Group presentations	Formative: 1. Group project (10 marks) Summative: 1. Mechanism test (25 marks)	Laboratory for machine construction, classroom with presentation spaces, analysis areas	- Pulleys, inclined planes - Materials for building machines - Charts on mechanical advantage	- Charts: Diagrams of simple machines - Project templates: Machine-building guidelines - Presentation slides: Efficiency	Teachers should be competent in simple machine concepts, project-based learning, and presentation assessment. Current status: Familiar with

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								analysis formats	collaborative learning.
Mechanics 1	1.5 Practical Applications	Scientific Competence, Practical Skills	- Real-world examples of forces and motion	- Case study analysis - Designing a simple device - Peer feedback	Formative: 1. Design task (10 marks) Summative: 1. Application test (25 marks)	Laboratory for device design, classroom with case study materials, peer feedback spaces	- Case study handouts - Materials for device design (e.g., wood, string) - Charts on real-world applications	- Handouts: Structured case study questions - Design templates: Device-building guidelines - Feedback forms: Peer review formats	Teachers need expertise in applied physics, case study facilitation, and design assessment. Current status: Proficient in practical applications.
Mechanics 1	1.6 Review and Reinforcement	Scientific Competence, Critical Thinking	- Review of forces, motion, moments, mechanisms	- Group review sessions - Solving past papers	Formative: 1. Group review (10 marks) Summative:	Laboratory for practical recap, classroom with quiet review	- Past papers for practice - Experiment tools (springs, levers)	- Charts: Summaries of key mechanics concepts	Teachers require skills in review facilitation, test preparation,

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				- Practical recap	1. Review test (25 marks)	areas, past paper access	- Charts for review	- Past papers: Sample questions for practice - Review guides: Structured topic summaries	and practical reinforcement. Current status: Experienced in collaborative review sessions.
End of Term Tests	Review of All Mechanics 1 Topics	Scientific Competence, Critical Thinking, Practical Skills	- Review of forces, circular motion, moments, mechanisms, applications	- Practice tests in groups - Peer-led review sessions - Individual problem-solving	Summative: Comprehensive test (50 marks: 10 per topic, mix of multiple-choice and open-ended questions)	Classroom with quiet testing areas, laboratory for practical components, past paper access	- Test papers with mixed question types - Past papers for practice - Experiment tools for practical tests	- Test papers: Structured with clear topic sections - Review charts: Summaries of key concepts - Past papers: Sample questions for practice	Teachers must be skilled in test design, grading rubrics, and feedback provision. Current status: Proficient in summative assessment design.

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