PHYSICS DP GRADE DESCRIPTORS

Grade 7

Displays comprehensive subject knowledge and a thorough command of concepts and principles. Selects and applies relevant information, concepts and principles in a wide variety of contexts. Analyses and evaluates quantitative and qualitative data thoroughly. Constructs detailed explanations of complex phenomena and makes appropriate predictions. Evidences great proficiency in solving problems, including those that are challenging or unfamiliar. Communicates logically and concisely using appropriate terminology and conventions. Shows insight or originality.

Approaches investigations in an ethical manner, paying full attention to environmental impact and safety where applicable. Investigations demonstrate insight and independence to design and complete innovative practical work with highly competent investigative and analytical techniques, and with innovative and effective conclusions to resolve authentic problems.

Grade 6

Displays very broad subject knowledge and a thorough understanding of concepts and principles. Selects and applies relevant information, concepts and principles in most contexts. Analyses and evaluates quantitative and qualitative data with a high level of competence. Constructs explanations of complex phenomena and makes appropriate predictions. Solves basic or routine problems and evidences competency in solving those that are challenging or unfamiliar. Communicates effectively using appropriate terminology and conventions. Shows occasional insight or originality.

Approaches to investigations in an ethical manner, paying significant attention to environmental impact and safety where applicable. Investigations demonstrate some innovative thinking and independence to design and complete practical work with competent investigative and analytical techniques, and with highly competent and reasonable conclusions to resolve authentic problems.

Grade 5

Displays broad subject knowledge and shows sound understanding of most concepts and principles, and applies them in some contexts. Analyses and evaluates quantitative and qualitative data competently. Constructs explanations of simple phenomena. Solves most basic or familiar problems and some new or difficult quantitative and/or qualitative problems. Communicates clearly with little or no irrelevant material.

Approaches investigations in an ethical manner, paying attention to environmental impact and safety where applicable. Investigations demonstrate appropriate investigative and analytical techniques with relevant and pertinent conclusions to resolving authentic problems.

Grade 4

Displays reasonable subject knowledge (though possibly with some gaps) and shows adequate understanding of most basic concepts and principles, but with limited ability to apply them. Demonstrates some analysis or evaluation of quantitative or qualitative data. Solves some basic or routine problems but shows limited ability to solve challenging or unfamiliar problems. Communicates adequately, although responses may lack clarity and include some repetitive or irrelevant material.

Generally approaches investigations in an ethical manner, with some attention to environmental impact and safety where applicable. Investigations demonstrate an ability to complete fairly routine practical work with some appropriate investigative and analytical techniques, and with some conclusions relevant to the problem under study.

Grade 3

Displays limited subject knowledge and shows a partial understanding of basic concepts and principles, and weak ability to apply them. Shows some ability to manipulate data and solve basic or routine problems. Communicates with a lack of clarity and some repetitive or irrelevant material.

Sometimes approaches investigations in an ethical manner, with some attention to environmental impact and safety where applicable. Investigations demonstrate an ability to complete a basic investigation with simple analytical techniques, and with some partial conclusions of some relevance to study.

Grade 2

Displays little subject knowledge and shows weak understanding of basic concepts and principles, and little evidence of application. Exhibits minimal ability to manipulate data and little or no ability to solve problems. Offers responses which are often incomplete or irrelevant.

Occasionally approaches investigations in an ethical manner, but shows very limited awareness of environmental impact and safety. Investigations demonstrate an ability to undertake basic investigative work requiring considerable guidance and instruction, and attempts at conclusions that are largely incorrect/irrelevant.

Grade 1

Fragmentary subject knowledge and shows very little understanding of any concepts or principles. Rarely demonstrates personal skills, perseverance or responsibility in investigative activities.

Rarely approaches investigations in an ethical manner, or shows an awareness of environmental impact and safety. Investigations demonstrate an ability to undertake very basic practical work with complete dependence on supervised instruction, with attempts at conclusions are either absent or completely incorrect/irrelevant.