BLUEPRINT

Mid-Semester Exam (PTS) • Science Grade 7

Material	Question Indicator	Question Type
Science and Its Branches	Students are able to identify the purpose of science and the appropriate branch of science for a scientific investigation.	Multiple Choice
Scientific Method	Students are able to identify and apply the steps of the scientific method, including observation, hypothesis, data analysis, and conclusion. Students are able to draw conclusions based on experimental results. Students are able to interpret experimental data, identify patterns, draw conclusions, and represent data using an appropriate graph.	Multiple Choice, Short Answer, Essay
Data and Observation	Students are able to distinguish between qualitative and quantitative data and identify examples of each type of data.	Multiple Choice, Short Answer
Variables in Investigation	Students are able to identify independent, dependent, and controlled variables in a scientific investigation.	Multiple Choice, Multiple Response, Short Answer
Physical Quantities and SI Units	Students are able to identify physical quantities, SI base units, base quantities, and derived quantities.	Multiple Choice, Multiple Response, Short Answer, Essay
Measurement and Measuring Instruments	Students are able to identify appropriate measuring instruments, read measurements, and recognize measurement errors. Read measuring instruments accurately (e.g., calipers, graduated cylinders, balances).	Multiple Choice, Short Answer, Essay
Laboratory Equipment	Students are able to identify laboratory equipment and explain its function in scientific investigations.	Multiple Choice, Multiple Response
Laboratory Safety	Students are able to identify hazard symbols and appropriate safety procedures and personal protective equipment when working in the laboratory.	Multiple Choice, Multiple Response
States of Matter	Students are able to identify and compare the characteristics of solids, liquids, and gases based on their shape and volume.	Multiple Choice, Multiple Response, Short Answer
Kinetic Particle Theory	Students are able to explain the arrangement, movement, and attractive forces of particles in solids, liquids, and gases.	Multiple Choice, Multiple Response, Short Answer, Essay