

Scientific Procedures & Safety

Science

use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process

Scientia

Latin word for knowledge

Scientific Theory

set of knowledgeable explanations for a certain phenomena

Empirical Evidence

information gained by means of observation, experience or experiment

Qualitative Data

set of data describing the findings of an experiment

Quantitative Data

set of data using numbers or measurements to represent the findings of an experiment

Control

experimental sample absent of the factor in question

Intervention

treatment or procedure modifying a given outcome

Incubation

act of keeping an organism, a cell or cell culture in conditions favorable for growth and development

Pathogen

agent causing disease or illness to its host

Gel Electrophoresis

process of applying electric current to proteins in a gel medium to separate them according to size and electrical charge

Polymerase Chain Reaction (PCR)

technique in molecular genetics permitting the analysis of any short sequence of DNA or RNA

Natural Phenomenon

non-artificial event in the physical sense, not produced by humans but may affect humans

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Physical Phenomenon

involving the physical properties of matter and energy

Hypothesis

tentative and testable statements which must be capable of being supported or not supported by observational evidence

Scientific Theories

are well-established and highly-reliable explanations based on natural and physical phenomena which are capable of being tested