



# SCIENTIFIC METHOD

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# SCIENTIFIC METHOD

**An area of inquiry is a scientific discipline if ; its investigator use the scientific method, which is a systematic approach to researching questions and problem through objective and accurate observation, collection, and analysis of data, direct experimentation, and replication of these procedures.**

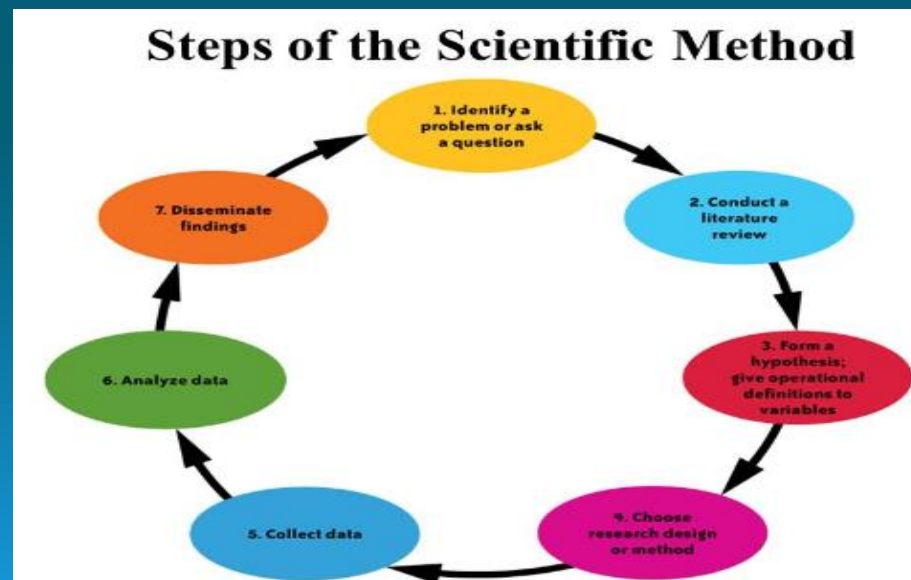
**Scientific method offers an objective methodology for scientific experimentation that results in unbiased interpretation of the world and refines knowledge.**

# DEFINITION

- **Wolf** “any mode of investigation by which science has been built up and is being developed is entitled to be called scientific method.”
- **Karl Pearson** “the scientific method is one and the same in all branches and method of all logically trained minds... the unity of all sciences consists alone in their method , not in their materials.

# PURPOSE OF SCIENTIFIC METHOD

The basic purpose of scientific methods is description, exploration, explanation, prediction, control, prescription and identification of relationship of the facts.

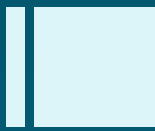


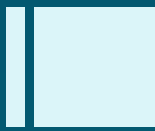
# THE STEPS OF THE SCIENTIFIC METHOD ARE AS FLLAWS

- The first step of the scientific method involves making an observation about selecting the topic and identifying the research problem
- Defining the objectives of the study.
- Reviewing the Literature from theories other related studies.
- Defining concepts and variables to be studied.
- Setting hypothesis about expected observations on phenomenon to be studied.
- Determining the ethical implication of the proposed study.
- Defining study population and sample.
- Planning the data analysis and discussion.
- Collecting data from subjects.
- Analyzing and interpreting data.

# CHARACTERISTICS OF SCIENTIFIC METHOD

- A scientific research begins with a single carefully observed event and progresses ultimately to the formulation of theories and laws.
- According to COHEN and NAGEL there are five basic characteristics, or tents, distinguish the scientific method from other methods of knowing.
- The first characteristic of scientific method is its nature of 'non-imposition; implying that the method aims only at discovering facts as they actually are and as they 'ought to be'.

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- **Secondly, scientific method deals with some specific issues. The scientific investigation is completed when the “felt- problems” are solved.**
  - **Thirdly, it is believed that scientific method follows a path of systematic doubt and is ever prepared to discard any theory when the established facts so demand.**

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- **Fourthly, the scientific enquiry follows a circular path as it not only proceeds from weighting evidence, appraisal of facts to experience but also from experience of facts. Being more particular about the consistency of the method followed rather than the result likely to be obtained, scientific method claims rationality. Its widespread desire for truth suspends all value judgments.**
  - **Fifthly, scientific enquiry seeks ‘verification and proof which is made possible through the combinations of relevant observation and logical verification of the phenomenon.**



## CHARACTERISTIC OF SCIENTIFIC METHOD

- ☞ It relies on empirical evidence.
- ☞ It utilizes relevant concepts.
- ☞ It is committed to only objective considerations.
- ☞ It results into probabilistic predictions.
- ☞ The methodology is made known.
- ☞ Aims at formulating scientific theories.



▪ REFERENCE TAKEN BY-

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**THANK YOU !!**