

The background is a light blue gradient with several realistic water droplets of various sizes scattered across the surface. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# METHODOLOGY OF AN EXPERIMENT

- **Methodology of a Biological experiment need a Logical and systematics planning**
- **Expected to answer questions pertaining to the**

**Purpose,**

**Scope,**

**Objectives,**

**Hypothesis,**

**Methodology,**

**Conclusions And**

**Practical applicability of the proposed research**

- **Size and Nature of sample, type of matching control, selection of control etc. are important**

# Designing and Methodology of an Experiment

- 1. Defining the problem you intend to study**
- 2. Define the aim and objectives of the study**
- 3. Review the literature of the problem**
- 4. Propose hypothesis**
- 5. Plan an investigation for studying the problem**
  - I. Sample selection**
  - II. Specifying the nature of study**
  - III. Rules out the observer**
  - IV. Instrument error**
- 6. Presentation of data**
- 7. Conclusion**

# Defining the problem you intend to study

- **Rate of Oxygen consumption in COVID-19 infected patient**
- **Trend analysis of AIDS patient with TB**
- **Relationship between Height, weight and BMR**
- **Radioactive radiation and blood cancer**
- **Pesticide/insecticide and yield of a Crop**
- **Stress and Yoga**

# Aim and Objectives

- **Seeking the solution of a problem by different methods**
- **Nature of the problem**
- **Make an inference about a population of interest based on the information obtained from a sample of measurements**

# Literature Review

- **Why researcher selected this work?**
- **What work has been done so far in the selected area?**
- **If the work already has been done someone in the past then clarify one want to confirm the findings, challenges , conclusion**
- **Bridge some gaps in the existing knowledge**

# State Your hypothesis

- a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation.
- Investigator has to begin with an assumption
  - Positive or
  - Negative

# Plan of Study

- **Selection of Sample**
- **Specifying the nature of study**
- **Rule out the Observer and Instrument error**
- **Standard format for recording data, Schedule, Proforma etc.**



# Presentation of Data

- **Classify and Tabulate the Data for presentation in the form of**
  1. **Text**
  2. **Table**
  3. **Diagram/Graph**
- **Present Frequency tables and diagrams as per the type of data.**

# Conclusion

- **Unbiased**
- **Verify the hypothesis is established or not**
- **Rechecking the plan before coming to any conclusion**

# Publications of the Work

- **Title of the work**
- **Name of Authors, affiliations, designation and contact address**
- **Abstract of the Work : Summary of the work with major observations and results**
- **Introduction**
- **Review of Literature**
- **Materials and Methods**
- **Results**
- **Discussion**
- **Conclusion**
- **Constructive Suggestion**
- **Acknowledge**
- **Declaration for Conflict of Interest**
- **Bibliography**
- **Supplementary Data**
- **Erratum**

# Study Type



