

Tutorial Concept Sheet 1
(Covers Lectures 1,2 and part of 3, and Pagano, Chapter 1)

Approaches to Knowledge

- Authority
- Deduction
- Intuition
- Scientific Method

Fundamental Goals of Science

- Description
- Prediction
- Control

Types of Experimentation

- Manipulative (“True Experimental”)
- Non-Manipulative (“Quasi-Experimental,” “Observational,” “Correlational”)

Types of Variables

- Independent
- Dependent

Operationalization

- Operational Definition

Scientific Experimentation

- Pilot Study
- Paradigmatic Tunnel Vision

Threats to Validity

- Subject Self-Selection and Selection Biases
- Experimenter Effects

Types of Controls

- Single Blind (Placebo)
- Double Blind

Descriptive vs. Inferential Statistics