


The Science of Psychology

Chapter 1
Introduction and Research Methods




Class Objectives

Ψ Why is Psychology a Science?


Ψ What is the scientific method?

Ψ NEXT class...

- How do researchers design a study?
- Why should I believe what researchers say?




When Psychologists perform research they begin by asking questions through critical thinking...

 The Science of Psychology

Ψ Psychology is based on two premises of science:

1. _____
 - Acquiring information through careful observation
2. Theory development:
 - _____

 Psychology as a Science

Ψ Psychologists must engage in *careful observation* when studying behavior and mental processes

Ψ What does that mean?

- _____
- They must gather information _____
- They must be able to _____

 *Systematic observation* is setting up our study so that we eliminate or reduce bias.

Setting up rules a head of time to reduce inferences.

“We must keep our minds open
but not so open that our brain
falls out.”

(Oberg, 1995)

Ψ Skepticism combines two opposing
attitudes:

- _____

Why can't scientists base
their research off of casual,
everyday observations?
(People watching)

Unfortunately, casual observation is subject to _____

We notice behavior that fits our stereotypes

Why is Research Conducted?


Ψ The purpose of scientific research is to _____


- This knowledge is applied in all areas of society to provide solutions.

In science, research strategies are categorized as either basic or applied.

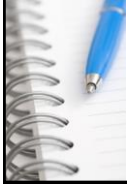
Ψ Basic research is designed to advance _____


Ψ Applied research is designed to _____






How Do Scientists
Collect and Evaluate Evidence?





Psychologists follow strict,
standardized scientific procedures so
that others can

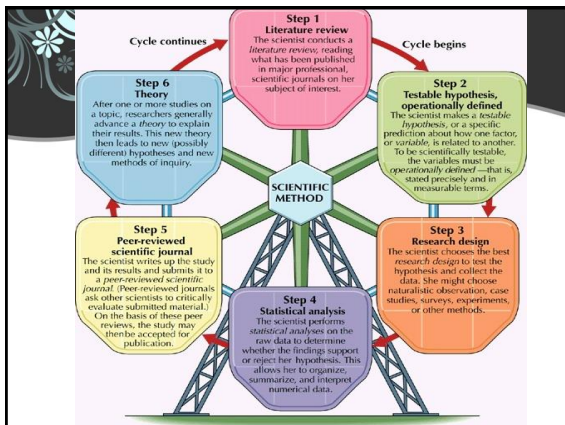


How is research conducted?

ψ *The Scientific Method* allows psychologists to
explore psychological issues _____


The Scientific Method

1. Formulate a research question by stating a question and performing a _____
2. Develop a operationally defined and _____
3. _____ is selected to test the hypothesis
4. *A statistical analysis* must be performed on the data to determine if the findings support or reject the hypothesis.
5. The research is *published* in a peer-reviewed scientific journal.
6. After one or more studies on a topic, researchers generally *advance a theory* to explain their results.



Scientific Method in Psychology

Ψ Before research begins, a problem must be identified

 **Make a Prediction!**


2. Develop a *testable hypothesis*, or a _____

What is your Hypothesis?

Ψ What could help us understand why Jack and Jill fell down the hill?

Ψ _____

- There is a correlation or a _____

 **The hypothesis must be testable, but also *operationally defined***

Meaning the variables are _____

by defining a numerical value.

Operational definitions allow
Psychologist's to study intangible
concepts by making them more

Examples of
Operational Definitions

- Ψ Aggressive behavior – the number of times a child punches a punching bag over the course of one hour
- Ψ Happiness – the number of times a person smiles while watching a Disney movie
- Ψ Intelligence – a score on an IQ test
- Ψ Anxiety – the number of pencils a student brings to an exam

Next...
Research Methods
