


The Science of Psychology

Chapter 2
Psychology's Scientific Method




Class Objectives

- ψ Why is Psychology a Science?
- ψ What is the scientific method?
- ψ Why should I believe what researchers say?

ψ NEXT CLASS:

- ψ How do Psychologist's design a study?
 - Types of research



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

Psychology as a Science


ψ Psychologists must engage in careful systematic observation when studying behavior and mental processes

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

(Oberg, 1995)

Why can't scientists base their research off of casual, everyday observations?


(AKA, *People watching*)



Unfortunately, casual observation is subject to _____ that can distort information

Ψ _____ combines two opposing attitudes:


- an openness to new ideas combined with a willingness to subject these claims to scrutiny.



Why is Research Conducted?


Ψ The purpose of scientific research is to create _____


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



How Do Scientists Collect and Evaluate Evidence?

The *Scientific Method* is how Psychologist's gain






Scientific Method in Psychology

Ψ Step 1: Before research begins, a problem must be identified.

- _____


Ψ Phenomena that psychologists study are called _____



Ψ Why are more students enrolling in community colleges than in previous years?

Ψ The answer to such questions are called _____

- Theories seek to _____, and they can be used to make *predictions* about future _____

 **Make a Prediction!**

Ψ Step 2: Develop _____, or a specific prediction about how one factor is related to another.

Ψ Drinking excessive amounts of caffeine before the exam will increase my score...how can we make this testable?

What is your Hypothesis?

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

 **Step 3-**
Testing through Empirical Research

It's time to design the study to test

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

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

Was my prediction correct?
Step 4 - Drawing Conclusions

- ψ Researchers draw conclusions about the results of the study. _____
- ψ Don't forget...this information **MUST** be *replicated* to be accepted as valid.

Evaluating the theory

ψ If the information produced in a study supports the original hypothesis it is

- The scientific community continues to debate the issue further.



Next Class...

Types of Psychological research
