

## Homework #1 Examples

Below are some examples of good answers for homework #1. These examples were taken (and modified) from last year's assignments, and they do not include the original articles (because of copyright restrictions). Please note that you will need to turn in the article with your assignment. Please note that the answers are to the point and relatively simple. Your answers may contain quotes taken from the article (not required for this assignment but required in future homework assignments), but it is not practical in these examples to do that.

If you have any questions don't hesitate to email us or stop by during office hours.

### EXAMPLE 1

#### Article

Title: "Drug appears to fight depression"

Source: WWW (newsday.com)

Date: September 13, 1998

**Goal:** To relieve depression.

**Model:** (Abstract)

Hypothesis: A new experimental drug produced by Merck called MK-869 may reduce depression by blocking a brain chemical called "substance P".

**Use:**

This model is used to explain how MK-869 may treat depression by its effects on brain chemistry.

**Limitation:**

Drugs affecting the brain often have various side effects, and MK-869 is unlikely to work merely by blocking substance "P."

**Status:** uncertain

Scientists are not sure how, or even if, the drug works by blocking "substance P" or not.

### Second Model

**Goal:** To test the effects of MK-869 on "substance P" and the possible effects on serotonin and norepinephrine.

**Model:** (Physical) Rats.

**Use:** Rats are used as models of humans to test the effects of the drug

**Limitation:**

Rats are not the same as humans, and may be affected differently by the drug.

**Status:** accepted

Rats are commonly used in evaluating chemicals to be applied to humans

## EXAMPLE 2

### Article

Title: "Lost in the middle"

Source: Time Magazine

Date: September 14, 1998 Vol. 152, #11.

**Goal:**

To improve the amount of attention that average students are receiving in America's schools.

**Model:** (Abstract)

Hypothesis: America's schools are focusing on high achievers and the learning disabled, leaving the average student with much less attention from their teachers.

**Use:**

This model is used as a method of explaining why average students in America seem to be suffering in their scores compared to students from other nations.

**Limitations:**

Gender, ethnic, and socio-economic background are not considered as deciding factors in whether a student gets the attention she/he needs.

**Status:** uncertain

The purpose of the article is to draw attention to this model, but the article leaves open the possibility that other factors are the cause of average student underachieving.

### **Second Model**

**Goal:**

To improve the quality of education in the U.S. relative to other countries by improving the education of average students.

**Model:** (Physical)

The average students who comprise 2/3 of the 8th grade class at Callahan Middle School.

**Use:**

This model is used to represent other 8th grade students in the U.S. that scored below the international average in math and science.

**Limitations:**

Not all 8th grade classes are the same. In particular, both the caliber of the students, their training, and their teachers may vary greatly between schools.

**Status:** accepted.

One eighth grade class is likely to be a reasonable model of some other such classes.

### **EXAMPLE 3**

#### **Article**

Title: "Records List Sewage Spills by Hundreds in Austin"

Source: Austin-American Statesman

Date: September 13, 1998

**Goal:** To reduce the health risks of water contaminated with sewage in Austin.

**Model:** (Abstract) Sewage spills in Austin cause infections in people drinking tap

water.

**Use:** Identifies a possible health risk to Austin residents.

**Limitations:**

The model identifies only one of many sources of these infections.

**Status:** uncertain

The extent of sewage contamination is unknown.

(This example only presents the first half of the assignment.)