

Science 7

Name _____

Unit A: Experimental Design

Period _____

Activity 4: Testing Medicines Scientifically

Purpose: To *understand* the key concepts embedded in a **clinical trial**. _____/34

Instructions:

Read Activity 4: Testing Medicines Scientifically on pages A-15 – A-17 in your book. As you read, fill out Data Table One below with definitions of the concepts. Finally, answer the analysis questions at the end of this worksheet.

Data Table One – Clinical Trial Concepts	
Concept	Tell the meaning of the concepts in the space below (1pt ea = 10 total)
clinical trial	1. 2.
informed consent	1. 2.
placebo	1.
control	1.
placebo effect	1.
possible reasons for the placebo effect	1. 2.
% of volunteers taking placebos report improvement	1.

(over)

Analysis Questions:

Answer the questions below using complete, quality and correct sentences reflecting the questions on a **separate sheet of paper in ink.**

Staple the completed questions to this handout. Be sure to restate the question in your answer.

Explain:

1. a. (4pt) what the purpose of a **placebo** is.
b. (4pt) why only one group of volunteers is given a **placebo** in a **clinical trial**.

2. **Analyzing Data.** Activity 3: A Clinical Trial simulated a **clinical trial** that investigated whether a headache medicine was effective. A person reporting a better or worse taste with the pink lemon drink (compared with the yellow lemon drink) represented a person feeling better after taking a pill for headache relief. In this simulation:
 - a. (2pt) Tell what represented the medicine.

 - b. (2pt) Tell what represented the **placebo**.

 - c. (2pt) Look again the data from Activity 3: A Clinical Trial. Tell how many people in your class experienced the **placebo effect**.

 - d. (2pt) Look again at the data on Activity 3: A Clinical Trial. Tell how many people in the **placebo group** were not affected by the **placebo**.

3. (4pt) Tell what a **trade-off** is **and** give one example of a trade-off

4. (4pt) Imagine a **clinical trial** testing the treatment of a serious illness, such as heart disease or cancer.

Analyze the trade-offs of giving one of the groups of volunteers a placebo. Please tell at least one advantage and one disadvantage of being a volunteer who is given a placebo.

Use this format for your data table.

Data Table 1 Advantages and Disadvantage of being given a Placebo	
Advantages (2pt each)	Disadvantages (2pt each)
1.	1.
2.	2.