**KEY --- Name That Design & Name Those Variables!**

1. A middle school principal is interested in knowing what effect taking the bus to school has on 6th-graders' test performance. She randomly picked a 6th-grade class and gave the same test to all the students. She already has a record of which kids get bussed to school versus get a ride with their parents. She found that the kids whose parents drove them to school did better than did the kids who took the bus.

Experimental or correlational design? CORRELATIONAL (*While the researcher is interested in testing for cause-effect, she does not manipulate any variables, so this is not a true experiment*.)

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| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Variable 1: mode of transportation |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Variable 2: test performance |

1. A United Way worker wanted to know if what a solicitor wears influences how likely Birmingham residents are to donate money. He divided a three-hour period into nine 20-minute sessions, and for each session he flipped a coin. If it landed heads, he wore a BSC sweatshirt for that session; if tails, he wore a UAB sweatshirt for that session. He found that people gave more money when he wore the BSC sweatshirt.

Experimental or correlational design? EXPERIMENTAL DESIGN. (*Because a variable – the intended cause, sweatshirt worn – is manipulated across sessions, and random assignment is used, this study is an experiment. There are no obvious confounds brought up.)*

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| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: sweatshirt worn by researcher\* | * Variable 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: amount donated by participant | * Variable 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

\*while “sweatshirt worn” is the *variable*, the *levels (*also known as *“conditions”)* of the independent variable are: BSC and UAB.

1. A grocery chain executive wanted to know if playing subliminal messages over the supermarket’s public address systems would lead to greater sales of Ramen Noodles. Of the 34 stores in her region, she played subliminal messages saying, "Mmmmm, Ramen! Yummy Ramen!" in 17 randomly assigned stores. She did not play any subliminal message in the other 17 stores. She found no difference in Ramen sales between the stores.

Experimental or correlational design? EXPERIMENTAL *(The researcher manipulated whether or not a subliminal message played in the stores, and randomly assigned the conditions of the independent variable (message vs. no message) to the stores. This makes the study an experiment. Had the researcher let the store managers choose whether or not to play the subliminal message, then this would be a correlational study as the researchers would have measured BOTH whether or not the message was played in each store and the Ramen sales.) PS. Subliminal messages are typically not effective, so that’s why she found no difference in Ramen sales.*

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| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: whether or not a subliminal message was played | * Variable 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: Ramen sales | * Variable 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. A professor wanted to learn whether his review sessions prior to exams actually improved his students’ grades. He recorded the number of review sessions each of his 30 students attended throughout the semester, and then he recorded each student’s final grade. He found that the more a student attended review sessions, the higher his or her final grade was.

Experimental or correlational design? CORRELATIONAL *(Because the professor measured/recorded both the # of review sessions* and *the final grade, we have a correlational study. Had the prof manipulated # of review sessions each student attended, we may have had an experiment.*

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| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Variable 1: # of review sessions attended by a student |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Variable 2: the student’s final grade |