The Reporter’s Questions

Who?  Who did it?

What?  What did he do?

When?  When did he do it?

Where?  Where did he do it?

Why?  Why did he do it?

How?  How did he do it?
The Researcher’s Questions

Who? Who did the research?

What? What were his objects of interest?

What? What were the variables of interest?

Why? Why did he do the research?
    What questions does he want to answer?

How? How did he collect his sample?

When? When did he do it?
Dr. Howell’s Questions

• Who is the sample collector?
• What are the objects of interest to the sample collector?
• What measurements are to be made on the objects of interest?
• What does the sample collector plan to do with the data he collects?
• The **objects of interest** are the people or items the researcher wants to study.

• The set of all objects of interest is called the **population**.

• The objects selected for the study are called **the sample**.
• The **measurements to be made** are called variables.
  – If the values of the variable are categories, the variable is called a qualitative variable.
  – Qualitative variables can be either nominal or ordinal.
  – The categories for a nominal variable have no natural order.
  – The categories for an ordinal variable have a natural order.
  – If the values of a variable are numbers, the variable is called a quantitative variable.
• What does the sample collector plan to do with the data he collects?
  – Usually the sample collector has a question he wants to answer.
  – Using the data in his sample to answer a question about a population is called statistical inference.
A sociologist wants to determine whether there is a relationship between the amount of money spent on food and the number of people in the household. She randomly selects 100 households from a large metropolitan area. For each household she records the number of people in the household and the amount spent on food each month.
Answer the Questions

• Who is doing the research?
  – A sociologist is doing the research. She will be called the sample collector.

• What are the objects of interest to the sample collector?
  – The households in a large metropolitan area are the objects of interest.
  – Hence the population is all households in that large metropolitan area.
  – The sample is 100 households chosen from that large metropolitan area.
• What measurements are to be made on the objects of interest?
  – The number of people in the household and the amount spent per month on food are the measurements to be made.
  – These measurements are the variables.

• What does the sample collector plan to do with the data she collects?
  – She wants to determine whether there is a relationship between the number of people in the household and the amount spent per month on food.