Lesson: Types of Data

Primary Data
Data gathered directly by the researcher in the act of conducting research or an experiment. Data can be gathered by surveys or through experimentation.

Secondary Data Data gathered by someone other than the researcher.

Experimental Data
Data gathered through experimentation

Aggregate Data
Data that is organized or grouped such as finding the sum over a given period or time

Observational Data
Data gathered by observation of the "subject"

Qualitative Variable
Consists of data that can be grouped by specific categories.

Ordinal _____ variable has a natural ordering of its possible values, but the distances between the values are undefined.

Nominal _____ Type of categorical variable that describes a name, label, or category with no natural order.

Quantitative Variable variable that describes a numerically measured value

Continuous _____ A numeric variable which can assume an infinite number of real values

Discrete _____ A numeric variable that takes only a finite number of real values
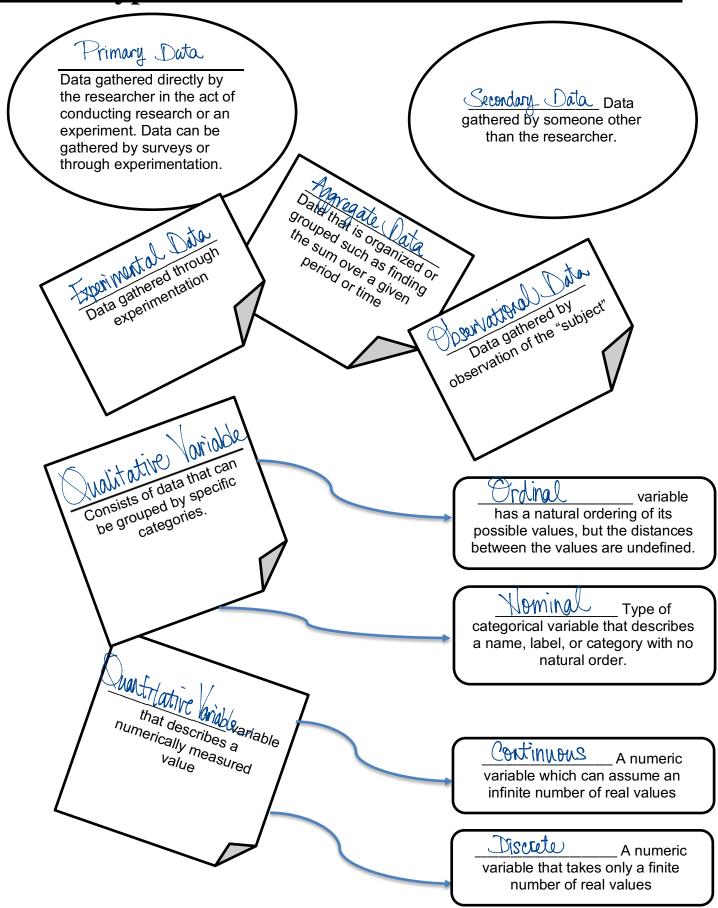
Practice: Types of Data

1. Use the words given to complete the sentences below.

   Discrete, Continuous, Categorical, Secondary

         32 pupils in a classroom fill out surveys….

   a) Their favourite type of fruit is _____ data.
   b) The span of the pupils hands is _____ data.
   c) The number of siblings each pupil has is _____ data.

2. Data is collected on the following areas. For each, state whether the data is continuous, discrete, quantitative, or qualitative. The data may fit more than one of these categories.
   a) Favourite colours of 30 students _____
   b) Time taken to run 100 m (to the nearest second) _____
   c) Duration of journey to school _____
   d) Which subjects were chosen as an option _____
   e) Number of students in the school each year _____
   f) Cost of the journey to school _____

3. Sarah is reading an energy saving article on the internet. The article covers a broad range of topics. She learns that the average UK household uses 349 litres of water per day.
   a) Is household usage of water discrete or continuous data? _____
   b) Is Sarah working with primary or secondary data? _____

4. Give one advantage and one disadvantage of using secondary data. _____

5. Which of the following is a significant problem specifically associated with secondary data?
   a) It is not be accurate.
   b) It is biased.
   c) It may not address the aims.
   d) It is expensive.

Answers:
1.a)categorical b)continuous c)discrete 2.discrete and qualitative b)discrete and quantitative c) continuous and quantitative d)discrete and qualitative e)discrete and quantitative f)discrete and quantitative 3.a)continuous b)secondary 4.advantage: take less time than collecting it yourself; disadvantage: unsure whether the sample is biased/representative/fair 5.it may not address the aims