**Activity Description: Introduction to Data Worksheet**

**Introduction:**

In this activity, you will dive into the world of data analysis by exploring a dataset containing information about the 2018 and 2019 Canadian finishers of the Lake Placid Ironman. Through this worksheet, you will gain hands-on experience in examining and interpreting data.

**Learning Objectives:**

By the end of this activity, you will be able to:

1. Identify cases within a dataset and understand their significance in data analysis.

2. Differentiate between categorical and numerical variables and explain their role in statistical analysis.

3. Create and interpret bar charts for single categorical variables.

4. Construct and interpret dot plots for single numerical variables.

**Methods:**

Before embarking on this worksheet, it is important to have a basic understanding of certain statistical concepts. Prior knowledge in the following areas will be beneficial for completing this activity successfully:

1. Data Types: Familiarity with different types of data, such as categorical (nominal and ordinal) and numerical (discrete and continuous), will aid in understanding the nature of variables in the dataset.

2. Cases: Understanding what constitutes a case in a dataset is crucial. A case refers to a single unit of observation or an individual record.

3. Categorical Variables: Knowledge of categorical variables, which have distinct categories or groups, will enable you to identify and analyze such variables within the dataset.

4. Numerical Variables: Familiarity with numerical variables, which represent quantities or measurements, is essential for working with numeric data.

5. Bar Charts: Understanding the construction and interpretation of bar charts will be useful for visualizing categorical data. Bar charts provide a visual representation of the frequency or proportion of each category within a variable.

6. Dot Plots: Knowledge of dot plots, a type of graph used to display numeric data, will aid in visualizing and interpreting single numerical variables. Dot plots provide a visual summary of the distribution of data points along a numerical scale.