**Random Sample, Population and Assignment**

**Learning Target:** Distinguish between and explain random assignment & random selection.

**Definitions:**

**Population:** The larger group from which a sample is drawn about which researchers will make generalizations.

**Sampling:** The selection of individuals/animals who will be selected from the population to participate in the study.

**Random Assignment:** The likelihood that all participants in a group or a sample have an equal chance of being assigned to the different conditions in the study.

**Part I:**

**Directions:** As each example is presented on the power point determine if the example relates to population, sample or assignment. Furthermore determine for the assignment and sampling if the example are in fact random and for population if it is ill or well defined. Use the laminated cards you have been provided to respond.

**Part II:**

**Directions:** For each of the following examples, identify the population and how a random sample and random assignment will be achieved before actually conducting the research.

1. A researcher wants to conduct a study to determine if a diet rich in fruit and vegetables will reduce Blood pressure for those who suffer from High blood pressure in Marshall Town Iowa. Please help this researcher define the population, sample and assignment for this research study.

Population: **Those suffering from high blood pressure in Marshall**

**Town**

Random Selection: **Assign numbers to all members of the population and have use a random number table to determine who will be in the study**

Random Assignment: **Of those who are in the sample randomly select number from a hat to determine who will be in the control group and who will be in the experimental group (fruit and vegetable group).**

2. Adlai E. Stevenson High School is trying to determine is students who spend half and hour meditating each day will experience reduced levels of stress.

Population: **All students attending Adlai E. Stevenson H.S.**

Random Selection: **Randomly select from all student ID numbers to determine who will be selected for the study**

Random Assignment: **Assign all participants a number, as you select numbers from a random number chart alternate between assigning students to the control or experimental (meditation) condition**

3. Daphne works at Lake Forest hospital as an art therapist, she wants to determine if depressed patients will be relieved of symptoms if they are exposed to abstract art four times per week.

Population: **All patients suffering from Depression at Lake Forest Hospital**

Random Selection: **Assign all patients a number and randomly select 50 participants**

Random Assignment: **Once again, assign all participants a number 1-50 and randomly select from a hat to determine if they will be placed into the art or the no art group.**

**4.** The owner of a biscuit factory (with multiple locations and thousands of workers) wants to determine if playing music in the background will cause workers to be more productive.

Population: **All employees at all of the owners biscuit factories**

Random Selection: **Assign all departments at all factories a number a using a random digit table select which departments will participate**

Random Assignment: **Put all departments selected in a hat an selected one at a time alternating between those selected to determine if they will work to music or not.**

**5.** Jeremy wants to determine is watching the presidential debates or hearing the presidential debates will impact his 1000 colleagues’ perceptions about the candidates.

Population: **Jeremy’s colleagues**

Random Selection: **Put all colleagues ID numbers in a hat a pull out a random sample of 200 colleagues**

Random Assignment: **Once again using the ID numbers without any pattern select id numbers and determine which will hear the debate and which participants will see the debate.**

**6.** Kayla believes that time will impact one’s decision making. She will test students on her campus to determine if they will make better decisions if they have more time.

Population: **Students on Kayla’s campus**

Random Selection: **Select a random sample from all student Id number to determine who will participate in the study**

Random Assignment: **Using the student ID numbers use a random digit table to match student ID numbers and alternate between assigning students to either the control or the experimental group.**

***Responses may vary slightly***