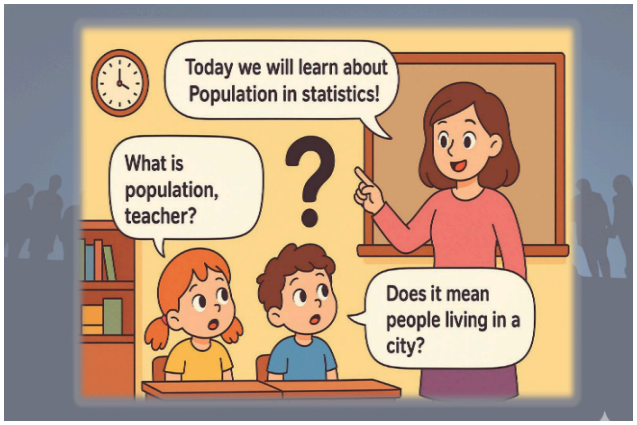
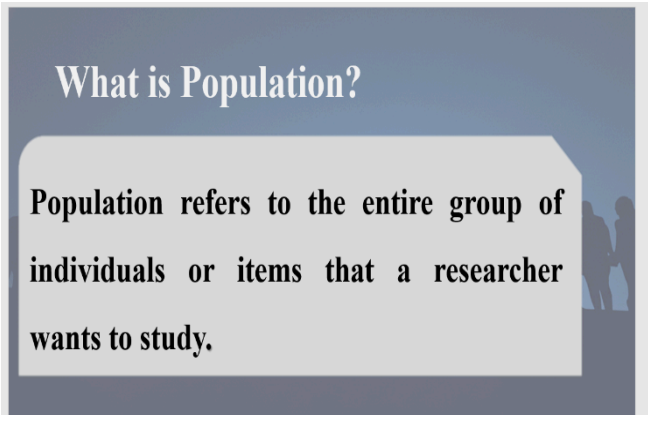
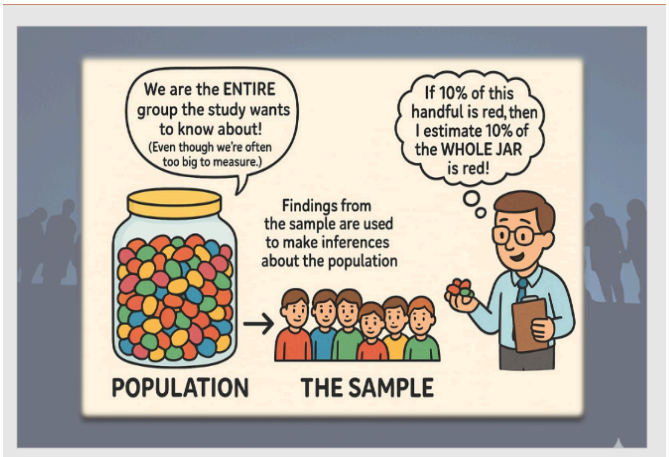
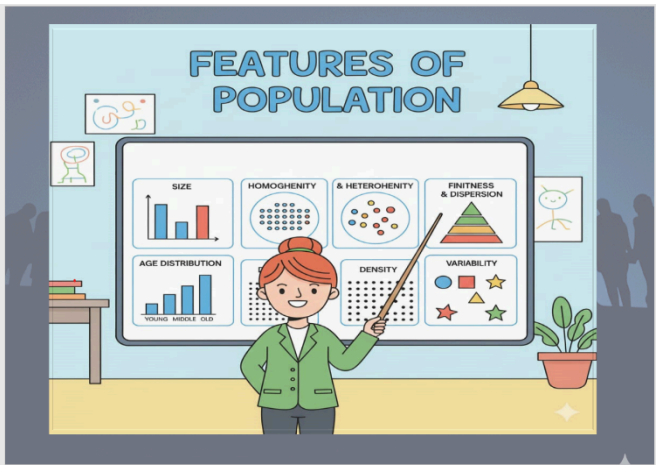
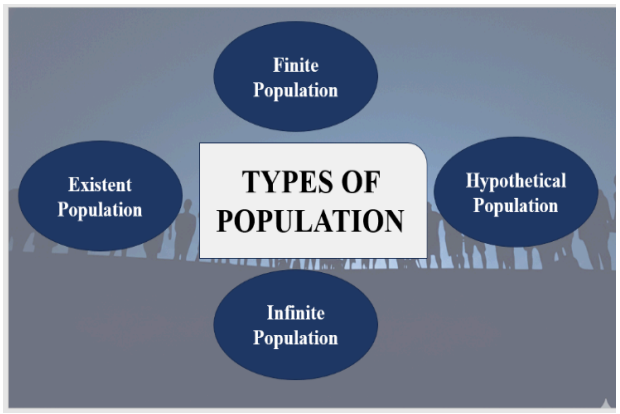
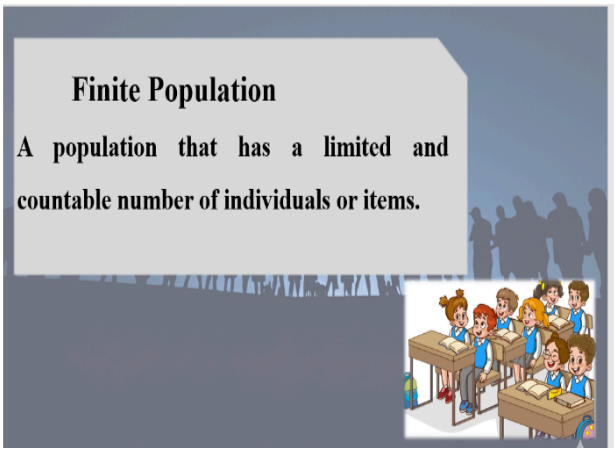
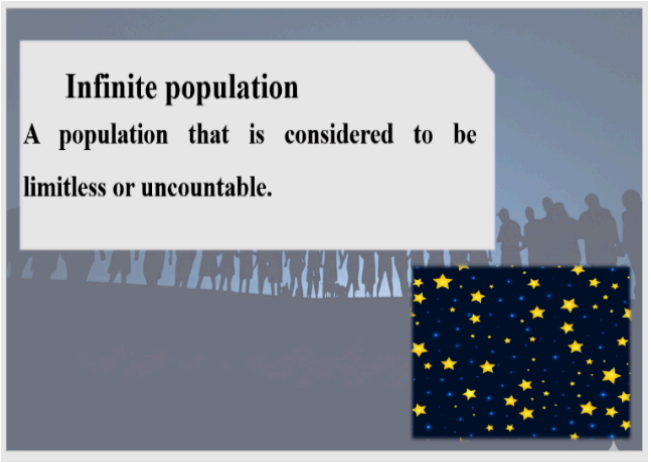
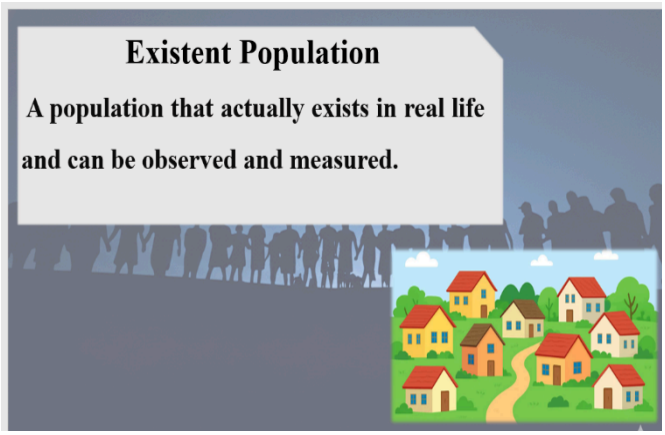
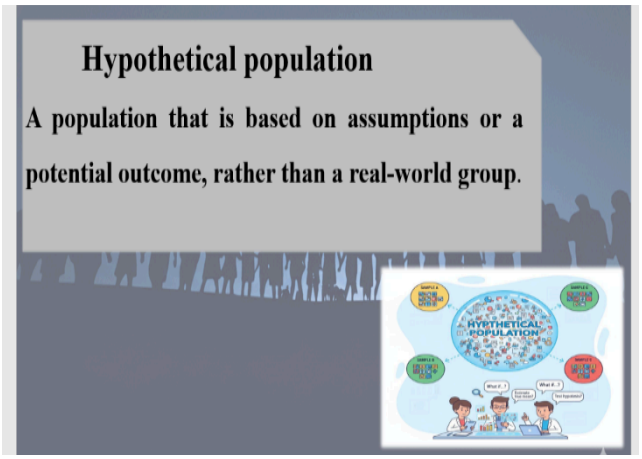
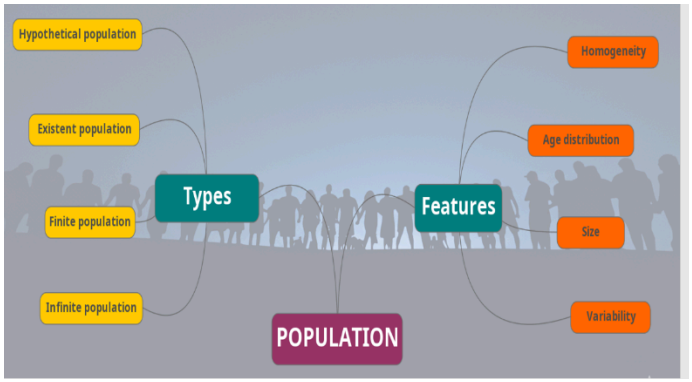
STORY BOARD

SLIDE	CONTENT
	Good morning students! Today, we are going to begin an interesting topic in statistics — Population. As you can see in the picture, the teacher is introducing the lesson, and the students are curious to know what 'population' really means. One student is asking, 'What is population, teacher?' while another wonders if it means 'people living in a city.' Just like these students, many of us may have similar doubts. So today, we will learn what population actually means in statistics and why it is important."
	Population in statistics means the complete set of individuals or items that a researcher wants to study. For example: If a researcher wants to study students in a school, the population is all students in that school. Population does not always mean people. It can include: Animals Objects Events Measurements

	Data values
	Look at this cartoon, the cartoon shows the difference between population and sample. The jar full of candies represents the population, which is the entire group the researcher wants to study. Since studying every candy is difficult, the researcher takes a small handful, which represents the sample. By checking this small sample—for example, finding that 10% are red—the researcher estimates that about 10% of the whole population (all candies in the jar) is also red.
	Next, we will learn about the features of a population. 1.Size (Population Size): This refers to how many individuals are in the population. Example: Total number of students in a school, total people in a city, etc. 2. Homogeneity & Heterogeneity Homogeneity: When the members of a population are similar. Example: A group of students all from the same class and same age. Heterogeneity : When the members are different from each other. Example: People in a city with different ages, jobs, languages, etc. 3. Finiteness Finiteness: A population that is limited and countable. Example: 300 students in a school 4. Age Distribution**:** How the population is divided by age Groups: Young, Middle, Old. It helps understand the structure of the population. 5. Density**:** Density tells how many individuals live in a certain area. Example: A crowded classroom = high density

	A large village with few houses = low density 6. Variability: Refers to how much difference exists among the members of a population. Example: Different heights, weights, marks or shapes in a group.
	Population can mainly be divided into four types. 1. Finite population 2. Infinite population 3. Existent population 4. Hypothetical population Let's examine each one in detail
	First, we will examine a finite population.Finite population is a group that has a limited and countable number of individuals or items. Its total size can be clearly determined (for example, the number of students in a class) The features are: Has an exact count Size is limited Easier to study and collect data from. Look at this picture; "We can count the students in the class".

	Infinite population is a population that is extremely large, so large that we cannot count all its members. Even though the items actually exist, the number is considered endless or impossible to measure. Because of this, we treat it as limitless. Features are: Cannot be counted Very large or limitless Impossible to list each item For example, the number of stars in the sky, the number of grains of sand on a beach “Look at this picture; we cannot count the stars in the sky”
	Next one is Existent population, Existent population means a population that actually exists in real life. The units (people, houses, students, trees, etc.) can be seen, listed, counted, and measured in some way. Key Features are: It is real, not imaginary. Its members exist now (or existed in a clearly defined period). The units can be identified (who/what they are). We can measure characteristics like height, weight, income, marks, age, etc For example look at this picture; Houses in a village or town – number of houses, number of people in each house. Students in a class – roll numbers, marks in mathematics, age.

	The last type of population is Hypothetical population, Hypothetical population is a population that is imagined or assumed, not directly existing as a concrete real-world group. It is created in theory to study possible outcomes, patterns, or probabilities, rather than to describe an actually listed group of units Features are: Based on assumptions: Defined using conditions like "all possible…", "if the process is repeated many times…". Not fully observable: Members cannot be completely listed or counted in practice. Used for theory and models: Helps in probability, sampling distribution, and theoretical research. Example: All possible results of tossing a fair coin infinitely many times. All possible heights of future newborn babies in a city.
	"Let's conclude the concept of population with this mind map." First, we learned about the meaning of population, population refers to the entire group of individuals or items that a researcher wants to study. By knowing the types of population and their features—such as size, homogeneity, and variability—we can collect reliable data and make meaningful conclusions.