

How does change in population impact the housing market?		
	Day 1	50 minutes
Learning Objective	Students will be able to analyze census population information and recognize trends to make declarative, logical statements based on patterns evident in the data.	
Background Information	<p>Federal housing dollars are connected to the population of a state as is planning for housing in a state. This lesson focuses on the intersection of California's population and housing, while asking students to demonstrate their understanding of determinants of supply and demand. This lesson requires students to know the basic principles of supply and demand. Students need to have been exposed to shifters and will use this lesson to apply and predict future outcomes of the housing market. The relevant information will come from the U.S. Census which will serve as the data source for this lesson.</p> <p><i>Prior to teaching this lesson make sure that students are familiar with key economic terms such as:</i> Supply, Demand, Supply Shifters (e.g., Cost of Inputs/Resource Cost, Technology, Productivity, Number of Sellers, Expectations, Government Regulation/Intervention), Demand Shifters (e.g., Tastes and Preferences of Consumers, Number of Consumers in the Market, Change of Income of Consumers, Buyers Income, Ease of Theft, Related Goods: Complementary and Substitute), Markets, Surplus, and Shortage.</p> <p>Free resources for teaching any of these terms can be found at: https://www.thebalance.com/</p> <p>There are a variety of vocabulary strategies to support academic language growth for language learners and students with special needs. One commonly used strategy is the Frayer Model. Look for a template and instructions in an online search engine.</p> <p>For an overview explanation of supply and demand including determinants (shifters):</p> <ul style="list-style-type: none"> • Supply https://www.thebalance.com/aggregate-supply-what-it-is-how-it-works-3306216 • Demand https://www.thebalance.com/what-is-demand-definition-explanation-effect-3305708 <p><i>Note: an accompanying PowerPoint presentation is available as an additional resource to teach this lesson.</i></p>	
Introduction	<p>Tell students that the learning objective for Day 1 of this lesson is that they will “be able to analyze census population information and recognize trends to make declarative, logical statements based on patterns evident in the data.” Be sure to define key terms/phrases from this learning objective (i.e., “analyze”, “declarative, logical statements”, and “patterns evident in the data” so that students are clear about their task and purpose during the analysis.</p> <p>Share with students that “There are a lot of practical ways that we use supply and demand in our lives and in planning for our future. This is true on an individual and community level. Today we are going to start by using data from the United States Census as a way to deepen our understanding of data analysis and predicting trends by looking at California's population data. We are going to apply the trends we see in changes to the population numbers and think about the intersection between supply and demand in the California housing market. During this two-day lesson, we'll engage in a productive struggle to analyze data, make predictions, and finally reflect on our learning. Let's start by answering the three warm-up questions independently before sharing our thinking with others.”</p> <ul style="list-style-type: none"> • Materials: computers with access to the internet or printed copies of all material and a copy of the worksheet for each student, and a whiteboard or screen to list supporting questions. • Accommodations and Supports: use the whiteboard or have a slide with written directions projected in the background for visual learners. 	10 minutes

	<p>Allow students a few minutes to work independently and silently on the 3 warm-up questions. The teacher should prompt students to turn to a partner and share their answers. Teacher circulates around the classroom monitoring on-task behavior and listening to students' thinking.</p> <ul style="list-style-type: none"> Materials: computers with access to the internet or printed copies of all material and a copy of the handout titled California's Economy for each student and a whiteboard or screen to list supporting questions. Accommodations and Supports: allowing students to write before they engage in a discussion is essential for all students, but especially for language learners and students with special education needs. 	
Evaluation of Sources	<p>The teacher will end the turn and talk period and ask for 2-3 student volunteers to share out (either their answer or the answer that their partner gave during the Turn and Talk time) and/or share out to the whole class one or two thoughtful student replies overheard while circulating. Encourage students to add to their warm up responses as they listen and engage.</p> <ul style="list-style-type: none"> Materials: copy of the worksheet for each student whiteboard or screen to list ideas shared. Accommodations and Supports: teacher notes/charts the ideas shared on the board or in another visible place for the students to add on to their warm ups. 	35 minutes
	<p>The teacher will next use the final Warm-up prompt (<i>"Make a prediction. What changes do you think California's population has undergone in the past 50 years? Explain your prediction."</i>) to bridge the next part of the lesson: "We just heard a few predictions about how our population might potentially change in the coming years. Participating in the U.S. Census is one way we can track our population. Each state participates in the Census so that the U.S. government can allocate federal dollars, and Congressional representation, based on the data gathered every 10 years."</p>	
	<p>Begin modeling the gathering of the population data using documents and handout and continue, saying "Let's now gather and analyze data about California's population from the last hundred and ten years to make predictions about the coming 2020 Census. In the google, folder go to the link titled Population of States and Counties of the United States 1790-1990. Scroll down until you get to page 20. This document has all of the states broken down by county. We want the total population of California which is the first row of information on page 20. Each column is a year.</p> <p>Now refer back to your handout titled California's Economy. Go to part II. Trends in California's Population and look at the first question that asks us to provide California's population in 1900 - from the table, we can see that in 1900 the population is 1,485,053. Record that figure, like so, in your handout and keep working independently until you have recorded all of the population numbers needed to complete the first table in part II."</p> <ul style="list-style-type: none"> Materials: handouts titled California's Economy and Population of States and Counties of the United States 1790-1990 (if digital version is unavailable). There is a modified document available as well as the full document in the Google folder. <p>Link to the modified document: https://drive.google.com/open?id=1eRlfaFPOohqM_T_ccvv7pJLzH5VloLgN</p> <p>Link to full document: https://drive.google.com/open?id=1BFBpVSgSersCB7D6W4R1JyFY7F6BJ34h</p> <ul style="list-style-type: none"> Accommodations and Supports: it may be advisable for students to work in pairs if data gathering and analysis are skills not often utilized in the classroom. A peer-assessment can be integrated into activity if the key is passed out to check the population data collection and the scenario-based supply and demand graphs. 	

	<p>Students dig into the population data, following the model provided by the teacher, to find all needed data. As students are working together to compile the data in their worksheets, teacher moves around the room to ensure students are efficiently collecting the correct data.</p> <p>Once students have recorded the necessary data, move students on to the next document entitled Congressional Apportionment 2010 Census Briefs to complete the second table in part II. of the handout. <i>Note: the total population for California will be found in the Total column cross-referenced by state.</i></p> <p>Have students continue working on data gathering and analysis to answer all questions in part II. of the California's Economy handout.</p>	
Closing	<p>Use the final question of part II. as a bridge to the next phase of the lesson.</p> <p>Remind students that the learning objective for Day 1 of this lesson was that they would “be able to analyze census population information and recognize trends to make declarative, logical statements based on patterns evident in the data.” Be sure to define key terms/phrases from this learning objective (i.e., “analyze”, “declarative, logical statements”, and “patterns evident in the data” so that students are clear about their task and purpose during the analysis.</p> <p>To gather feedback on how well students attained this objective, collect handouts prior to students leaving OR they will have circulated around the room while students were completing part II. of their handout to formatively assess student learning.</p> <p>Be sure to correct any misconceptions or misunderstanding, or add necessary insights and connections, prior to closing Day 1 of the lesson.</p>	5 minutes