Slide 1

Text: Standard 12, Human Settlement Patterns

[Image of native tribe near a lake] [Ad for land in Illinois]

Audio: Standard 12, Human Settlement Patterns. The last unit, Standard 11, examined the spatial relationships and networks of trade in commerce. This unit looks at the differences in human settlement patterns on earth. Human beings rarely live totally apart from other human beings, yet from place to place they arrange themselves differently. Just as we examined the interconnections between the global, regional and local economies in Standard 11, Standard 12 looks at factors such as size, composition, location, arrangement and function of human settlements. As settlements grow, they acquire some kind of a plan or arrangement or layout or structure depending on the factors I just mentioned, size, composition, location, arrangement and function. Towns and cities will vary in size, and they will be composed of many diverse groups of people who are engaged in activities that revolve around everyday life, economic activities, social or cultural activities, political, administrative activities, religious activities and so on. The image on this slide illustrates this concept. Indian tribes began to domesticate agriculture about 7,000 years ago. They cultivated corn, squash and other crops that we still eat today. In the 17th and 18th hundreds, European settlers displaced many Native Americans as they immigrated westward. They started small farm steeds and the prairies. In about 18 when Illinois gained statehood, land sales offices opened and more settlers moved to the state to farm. Population increased rapidly, English, German, African-American and other groups started settlements in towns in the area. After thousands of subsistence, farms were created. Mechanization of farming began to increase, small subsistence farming gave way to commercial farming or industrialized farming. Crops and livestock breeds were improved and machines displaced farm labor. From 1850 to 1900, farm production and the marketing of commodities become faster and easier as communications improved, and as the roads and railroads reached many areas of the state that were formerly not accessible. Chicago, the largest city in the region was growing as a center of rail and water transportation in commerce. Technological change in the 20th century continued. Many small farms disappeared, yet others are still in the hands of the descendants of the original owners. Other farms were absorbed into larger farms or the land sold and divided and developed into suburbs. Farming continued to change, as new innovations or inventions or improvements and chemicals and genetic science has developed new products. Illinois became part of the breadbasket of the nation, and indeed the world.

Slide 2

[Image of the English metes and bound system, the French long lots, and the Spanish system of land division] [Aerial photo of farmland] [Photo of a 20-sided Wisconsin barn] [Photos of dairy products]
Audio: The way in which a settlement emerges, how it grows, and what keep its viable is very important to geographers. Looking at cities, old and new cities and even future cities helps us to understand the values of the societies that emerged from these places and that created these places. Village, town and city settlement patterns and structures vary from place to place, country to country, region to region and of course time to time. The size of the place, the way it functions and its economic specialization in relationship to other places also will reflect a network, and an interconnectedness like we saw in standard 11 when we looked at economic relationships. Looking at these slides there are four images. The image in the upper left hand corners shows us the English metes and bound system of land division. English settlement of North America began in the early 17th century. The English brought with them a form land division, will check gained wide use in the British Isles. This form of land division is known as the metes and bound system. Metes is spelled M-E-T-E-S, metes and bound system. Metes and bounds means measurement and boundaries. A typical metes and bounds land deed would define the property boundaries as, "Beginning with the Large White Oak 13 poles above the Sinking Spring, or Rock Spring, Running thence North 9 1/2 degrees East, 310 poles to a stake in John Taylor's field, thence South 89 1/2 degrees East, 310 poles to two Blackjacks, then North 89 1/2 degrees East, 155 poles to the beginning". This example is a property deed for land and which Abraham Lincoln was born on February 12, 1809 in Kentucky. The boundaries of the property are irregular and based on natural features in the landscape. Most of the eastern portion of the United States from the Appalachian plateaus to the Atlantic Coast was divided using this land survey system. Street patterns and county lines throughout much of the Atlantic Coast reflect that irregularity of the metes and bounds land division system. This system of land division was used very rarely in the Midwest and west of the Mississippi River. Looking in the upper right hand corner, we see another method of land division, the French long lots. The French long lots system was easy to survey and gave each individual settler an equal share of both the best and the worst lands located in the area. And of course most importantly access to water. This system however, also had its problems. If a river is straight, right angle lines for the land survey will remain parallel to one another even a mile away from the water's edge. However, when a river bends and curves like the Mississippi does, the properties will take the form of either thin triangles on the inside of a river bend or a broad fend on the outside of the bend as you can see in this photograph. Furthermore, when a floods and changes it's course, again as the Mississippi often does, some properties may completely lose access, while properties will become bisected by a new river channel. This is still a common land division property in Louisiana today. Looking at the photograph in the bottom left hand corner, we see a picture of a 20-sided Wisconsin barn. This barn represents one of the many types of ethnic barns built by the Poles or the Danes or the Norwegians or the Germans or other groups of settlers in Wisconsin. The trio of pictures in the bottom right-hand corner shows us Wisconsin cheese and immigration and economics. The story of Wisconsin's dairy industry has roots in prehistoric times, natures at the stage for America's dairy land during the last ice age when glaciers cut through what is now Wisconsin. As the glaciers receded, the massive amounts of ice left behind the countryside of
rolling hills and lashed pastureland. Millions of years later when European immigrants migrated west, they found the nation's heartland, which reminded many of them of their homelands. Climatic conditions suited farming well. And initially farmers grow wheat, hops and other grains. Dairy farming followed naturally and dairy farmer soon produced an abundance of top quality milk. To preserve excess milk, farmers make cheese. The move from producing cheese for family use to making cheese to sell was an easy step. Commercial production of cheese in Wisconsin began in a small scale and has grown into one of the states many claims to fame. And its cows are the happiest.

Slide 3

[Map of the US showing distribution of rural and urban population from 1890 to 1960] [Graph of urban population as a percentage of US total, 1790-2000]

Audio: Increasingly, the human population lives in cities, the largest and most dense kind of human settlement. Most mega cities or cities with more than 10 million people are not in the developed part of the world but rather, they are in the developing world, an issue that will need much examination in the future to avert catastrophic situations. Globally, about 50 percent of the world's population lives in cities. In the US, about 75 percent of the population lives in cities. Of course, the average will vary from state to state and according to the region. In the map in the upper portion of this slide, you can see the decline of the rural population and the rise of the urban population from 1890 to 1960. On the graph at the bottom of the slide, you see the continued rise in urban population in the US until 2000 and likewise, the decline of the rural population.

Slide 4

[Maps showing the population of Arizona counties, 1910, 1930, 1950, 1970 and 1990] [Map of Arizona’s natural infrastructure and the projected urban footprint, 2050] [Table of Arizona's population and population growth in Arizona accounted for by Hispanic and foreign born persons, 2000 to 2006]

Audio: In Arizona, the population is about 6 million. At least half of Arizona's population lived in the Phoenix Metropolitan area, Tucson, Flagstaff and a few other cities with populations of 50,000 or more. Looking at the images on this slide, the top image shows population of Arizona counties, 1910, 1930, 1950, 1970 and 1990. And what we can clearly see on these maps is that the Phoenix Metropolitan area, South of Tucson, North to Flagstaff is the area of the state that has grown the most. Arizona's population is projected to double by 2050. In the map in the bottom left hand corner, we see that a survey of the natural environment and growth projections reveal that if the growth continues at its current rate, we will lose nearly 2 million acres of the natural environment by 2050. This would be the loss of the desert, the grassland and forest habitat. Arizona's natural environment includes lands and waters that preserve the states natural
heritage and open space. The Center for Science and Public Policy developed a natural infrastructure data set. By integrating 12 studies and wild life habitat and open space, and they used it to create future growth scenarios. On this map, areas in yellow are portion of the natural environment or natural infrastructure, again, almost 2 million acres, that would be converted to the urban land under current growth projections of 2050. The table in the figure at the bottom right up this slide show Arizona's population and population growth in Arizona accounted for by Hispanic and foreign born persons, 2000 to 2006.

**Slide 5**

**Text:** “Boswash”

[Map of the east coast of the United States from Boston to Washington, DC]

**Audio:** The map on this slide shows us a portion of the United States on the East Coast going from Boston, Massachusetts to Washington, D.C. This densely populated corridor from Boston to Washington D.C. is referred to as a megalopolis. And a megalopolis means a group of studies or a long string of metropolitan areas in a region connected by transportation, communications, and economics. Hark back to the factors that we talked about in slide one, the factors that go into the human settlements. Think about the size, the composition, the location, the arrangements and the function of human settlements. Looking at Boston to Washington, D.C., how can you see each of these factors play out in the creation of Boswash?

**Slide 6**

[Photo of slums] [Photo of a person in a tent] [Map of US poverty divide] [Photo of a beggar’s sign]

**Audio:** Cities vary dramatically from place to place on the planet. Cities in the developed world are quite different from developing world cities. Looking at the picture in the upper left hand corner, we see a developing world city. In the foreground, we see the slums of the city and in the background we can see the large buildings, the tall buildings, the skyscape. Towns and cities in the world's developing countries are growing on an unprecedented scale. 10 years ago, an estimated 40 percent of the developing world's population about 2 billion people lived in urban areas. Since then, their numbers have expanded almost twice as fast as total population growth has grown to more than 2.5 billion. This is the equivalent to almost 5 new cities the size of Beijing every 12 months. By 2025, more than half of the developing world's population will be urban. The affluence or poverty of any country also will be reflected in its many cities as you can see in the slums of the first image and the pictures on the right hand side of this slide. The US definition of poverty is more than 40 years old and critics think it's time for an overhaul. Mayors from all over the country met in LA to come up the plan for resetting the poverty line. The map on the bottom of this slide shows the US continental poverty divide, higher concentrations of
poor we see in the South then in the North. According to CBS News, "the ranks of the working age poor climb to the highest levels since the 1960s as the recession through millions out of work last year living 1 and 7 Americans in poverty. The overall poverty rate climbed to 14.3 percent or 43.6 million people. The Census Bureau said Thursday in its annual report on the economic well being of US households. The poverty rate climbed from 13.2 percent or 39.8 million people in 2008. The share of Americans without health coverage rose from 15.4 percent to 16.7 percent or 50.7 million people mostly because of the loss of employee provided health insurance during the recession. Congress pass to health overhaul this year to address rising numbers of the uninsured, but the main provisions will not take effect until 2014."

Slide 7

[Map of Native American land in the United States] [Map of Great Lakes during the French Era, 1634-1763] [Photo of an abandoned house with "chicken under the house" written on the side] [Image of book cover for Gateway to the Northern Plains]

Audio: The settlements and the patterns, they etch on Earth's surface provide not only data on current economic and social aspects of human existence but also a historical record for us to examine. Today's settlement patterns, evident on a map provide information about past settlement patterns and processes, and the boundaries of the counties, and other political entities indicate how people organize the land as they settled on it. For example, geographers might examine things like the distribution of Indian land in the United States, which you can see in the map in the upper left hand corner of this slide. Or we might look at the French exploration and settlement and trade in the United States in the 1600s through mid-1700s, such as the map shows us in the upper hand corner. Or we might look at the decoded territory along a rail line in the 1860s. Again, look at the size, the location, the composition, the economy of these places. In a review of the book Gateway to the Northern Plains: Railroads and the Birth of Fargo and Moorhead, the reviewer states, "In the 1860s, land speculators in Minnesota and the Dakota Territory expected that a great city would rise where the railroad cross the Red River of the North. In 1872, after the Northern Pacific Railroad laid its first tracks along the river, it brought settlers, capital and access to eastern markets and gave birth to the twin cities of Moorhead and Fargo. Historian Carroll Engelhardt's, Gateway to the Northern Plains chronicles the story of Fargo and Moorhead's birth and growth. Once just specks on the vast landscape of the Northern Plains, these twin cities prospered, teeming with their own dynamic culture, economy, and politics. Moorhead was the first, boosted by railroad manager Thomas Hawley Canfield, who touted it as superior to Fargo. Amid disputes and deals with entrepreneurs, the railroad company provided land for public schools and churches to speed the refinement of the settlement. Despite Moorhead's earlier start, Northern Pacific Railway chose Fargo as its headquarters, and it became the "Gateway City" to North Dakota. Development in these two cities was not always harmonious. As the population increased, so did the pressure to conform to middle-class values. Residence joined together to create communities, churches and schools clashing with migratory
harvest workers, usually single men who patronized saloons, brothels, and gambling dens. Outraged citizens work to eliminate such antisocial behavior and establish moral order. Though the dominant Twin Cities to the south limited Fargo and Moorhead's size and to success, settlers from far and wide poured in, creating a diverse population and vital culture. There are many histories of the major US cities, but in Gateway to the Northern Plains, Engelhardt reveals how the small cities of the plains have made their mark on the country as well as on the reality and to the myth of the American West." Finally, the picture in the lower left hand corner is a picture that I took when I was in New Orleans after hurricane Katrina. We see a devastated house, an abandoned house, or someone has written on the side, "chicken under the house". The other various writing that you see is left from people who came by, one after the other to check on and evacuate residents. We might ask ourselves how the New Orleans topography, hydrology, politics, and even demographic composition contributed to the devastation of hurricane Katrina.

**Slide 8**

**Text:** Conclusion Space & Settlement Patterns

[Photo of sign for Anthem by Del Webb] [Photo of an older woman with words “The Coming of Age” over it]

**Audio:** Students must develop an understanding of the processes, patterns and functions of human settlement across Earth's surface. In doing this, they will begin to appreciate the spatially ordered ways in which Earth has become the home of people. Students need to acquire a working knowledge of such topics as, the nature and function of cities, such as the processes that cause cities to growth and to decline. In both population as well as the importance or influence, and also how cities are related to their market areas, their hinterlands or their outline areas. Students also need to know about the patterns and land use and value and population density and housing types, ethnicity, socioeconomic status and age distribution in urban areas. The patterns of change, growth and decline with an urban areas and the processes of suburbanization and finally, how new types of urban nodes develop are also ideas that students need to understand. Note for example the picture in the upper right corner. The picture’s of Anthem, its elite division or community about an hour north to Phoenix. How did it come to be? Geographers ask these questions to make sense of the distribution and concentrations of human populations on the planet. The last example we look at here is that growing elderly population in Arizona. This estimated that Arizona's 60 plus population would triple in size from approximately 875,000 people in the year 2000 to almost 3 million by 2050. This next generation of elderly is the Baby Boom generation and it's a larger population than ever before. Older populations today live longer and healthier lives than they did in the past. Yet, the demands in the healthcare system are going to be tremendous. What do you think will be the implications or the consequences of this demographic shift?

**Slide 9**
[Photo of Elizabeth Larson]

**Audio:** This lecture prepared and presented by Beth Larson, School of Geographical Sciences and Urban Planning, Arizona State University, 2010.