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**Allison Hunt** is National Board Certified Teacher and an Advanced Placement Human Geography teacher at duPont Manual High School in Louisville, KY. She is also the moderator of the AP Human Geography Community, a former member of the AP Human Geography Test Development Committee, and a steering committee member for the Kentucky Geography Alliance. She has received awards including the 2013 Kentucky High School Teacher of the Year, 2012 Gold Star Teacher Award from w!se, 2012 Behring National History Day Kentucky Teacher of the Year, 2011 WHAS-TV ExCEL Award, 2009 Distinguished Teacher Award from the National Council for Geographic Education, and the 2008 Kentucky Outstanding Social Studies Teacher of the Year Award from the Kentucky Council of Social Studies. Allison earned her Bachelors of Science degree in Business Administration/Political Science from Georgetown College, her Masters of Arts in teaching degree from the University of Louisville, and is currently pursuing a Ph.D. in Curriculum and Instruction at the University of Louisville.

**Exploring Patterns of Development**

**Lesson Objectives**

Using the National Atlas of Korea and supplementary resources, students will:

* Identify the different measures of development
* Evaluate the different measures of development
* Explain the social and economic measures of development
* Observe geographic patterns related to development
* Analyze geographic phenomena at different scales (Korea and global)
* Apply Rostow’s Stage of Growth and Wallerstein’s World Systems Theory

**AP Human Geography Course Description Tie-In**

Unit VI: Industrialization and Economic Development

Enduring Understanding B. Measures of development are used to understand patterns of social and economic differences at a variety of scales.

Learning Objective 1: Explain social and economic measures of development.

Learning Objective 2: Analyze spatial patterns of economic and social development.

**Activity 1: Development Indicators Discussion**

1. What are the different social and economic indicators of development? What are the potential limitations of each as an indicator of development?

*Responses will vary. Push students to go beyond just income and to reflect on other potential indicators. Define each indicator. If students can’t think of actual names of indicators then have them just brainstorm concepts like “education” and push them towards indicators by asking “what with education would indicate development and why?”*

*As far as limitations- the key limitation of all except HDI is that they are a single measure. Also, all of the indicators are generalization of the country and do not account for differences within the country (except Gini coefficient)*

Gross National Income (GNI)

* + GNI consists of all the income earned by businesses and individuals whether they earn that money in the country or in another country.
  + Weaknesses: may be underestimated in LDCs since they have more informal economic activities (those not tracked by the government); does not show inequalities in the country, is just an average

Physician Ratio

* + Number of doctors per 1,000 (Note: according to the WHO, over 44% of member states have fewer than 1 doctor per 1,000 people)

Literacy Rate:

* + Percentage of the population over 15 years old that can read and write in their native language

Infant Mortality Rate (IMR)

* + The number of deaths of infants before they reach one year old per 1,000 live births

Total Fertility Rate (TFR)

* + The number of children born on average per woman of childbearing age

Gender Inequality- Gender Inequality Index (GII)

* + Measures gender inequality
  + in terms of health, empowerment, and the labor market

Income Inequality- Gini coefficient

* + Examines the disparity between the highest and lowest incomes in the country

Sectoral Structure

* + Examines the primary, secondary, and tertiary sectors of the economy in terms of growth rates and/or percentage of GDP

Secondary School Enrollment

* + the ratio of children of the official secondary school age who are enrolled in secondary school to the population of the official secondary school age

Life Expectancy

* + the average number of years someone lives

***Indicators specified in the AP Human Geography course description are- Gross National Income, sectoral structure, income distribution, fertility rates, Infant Mortality Rate, access to health care, literacy rates***

1. How and why are social indicators combined with economic indicators to provide a fuller picture of country’s level of development?

*Potential answer- Development used to be measured in exclusively economic terms, but then consideration was not given to progress that was made within countries in terms of quality of life as a whole (such as health advances) so a multidimensional approach such as HDI is usually favored. Also, by using multiple indicators then some of the weaknesses of each individual indicator are lessened.*

For more information see the UNDP issue brief “UNDP and the Concept and Measurement of Poverty” <http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/issue-brief---undp-and-the-concept-and-measurement-of-poverty.html>

**Activity 2- Development Indicators Card Sort**

Have students sort the Development Indicator Cards (included in the instructor materials) into different categories. Recommended categories are economic, health, and education since those categories are part of the Human Development Index (HDI)

*Economic indicators- GNI, % of economy tied to primary sector, income inequality*

*Health indicators- IMR, Physician Ratio*, *Life expectancy*

*Education indicators- Literacy rate, secondary school enrollment*

Have students sort the Development Indicator Cards again, but this time into those with positive relationships with development (direct relationships- meaning if the indicator is higher then development is greater) and those with negative relationships with development (inverse relationships- meaning if the indicator is higher then development is lower).

*Positive (direct) relationships- GNI, Physician Ratio, Literacy Rate, Secondary School Enrollment, Life Expectancy*

*Negative (inverse) relationships- % of economy tied to primary sector, income inequality, IMR*

Recommended extension- Have students read <https://qz.com/685626/the-world-bank-is-eliminating-the-term-developing-country-from-its-data-vocabulary/> and articulate what they think is best in terms of categorizing countries and their rational for their choice.

**Activity 3: Analyzing Global Patterns**

Have students look at the following sites to determine global patterns regarding development OR show the maps and discuss it as a class (maps are included in the teacher resource PowerPoint). You may also wish to provide students with outline maps of the world on which they can shade highs and lows.

Students should note for each:

1. What regional patterns are evident? Highs? Lows?

2. What other factors might influence this measure?

3. How many categories of countries seem apparent from this measure (look beyond the map legend!)?

4. (Pre-loading for next activity) Where does Korea fit into the global landscape? (low, medium, high?)

Gross National Income <https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?view=map>

Physician Ratio: <http://www.who.int/gho/health_workforce/physicians_density/en/>

Literacy Rate: <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?view=map>

Infant Mortality Rate

<https://data.worldbank.org/indicator/SP.DYN.IMRT.IN?view=map>

Total Fertility Rate

<https://data.worldbank.org/indicator/SP.DYN.TFRT.IN/?view=map>

Gender Inequality Index

<http://www.viewsoftheworld.net/wp-content/uploads/2015/05/GenderInequalityMap.jpg>

Gini coefficient

<http://www.viewsoftheworld.net/wp-content/uploads/2015/05/GenderInequalityMap.jpg>

Sectoral structure:

Agriculture % of GDP

<https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?view=map>

Industry growth

<https://data.worldbank.org/indicator/NV.IND.TOTL.KD.ZG?view=map>

Secondary School enrollment

<https://ourworldindata.org/primary-and-secondary-education#enrollment>

Life Expectancy <http://www.who.int/gho/mortality_burden_disease/life_tables/situation_trends/en/>

**Activity 4: Shifting Scales Analyzing Patterns and Causes of Development Within Countries: Korea as a Case Study**

Have students (individually or in small groups) read the text and examine the visuals for each of the following issues. You may wish for each student to identify one additional issue they can tie to development as well.

Life Expectancy

<http://nationalatlas.ngii.go.kr/pages/page_907.php>

Distribution of General Hospitals and Number of Beds <http://nationalatlas.ngii.go.kr/pages/page_908.php>

Total Fertility Rate

<http://nationalatlas.ngii.go.kr/pages/page_838.php>

Overview of Korean Education

<http://nationalatlas.ngii.go.kr/pages/page_912.php>

Agriculture, Forestry, Fisheries, Mining <http://nationalatlas.ngii.go.kr/pages/page_862.php>

Economic Growth

<http://nationalatlas.ngii.go.kr/pages/page_856.php>

For each:

* + Provide a basic overview of the issue
  + How does Korea compare with the rest of the world (may need to go back to activity 3 and/or use any visuals provided)?
  + Reading the text, how has Korea progressed on this issue? What challenges remain?
  + As applicable, what regional patterns of development are present within Korea? Identify factors that contribute to regional variations.

**Activity 5: How Did Korea Develop?**

During the past sixty years, the Korean economy has experienced a rapid change as it went from a country in abject poverty to the world’s fourteenth largest economy.

1. Have students read over (or present to them the highlights of) this overview regarding the rapid economic transformation- <http://www.korea.net/AboutKorea/Economy/The-Miracle-on-The-Hangang> (note: highlights are on the provided PowerPoint)
2. In small groups, discuss how the economic transformation of Korea aligns (or fails to align) with Rostow’s Stages of Economic Growth by looking at characteristics of each stage and characteristics of Korea. Have students classify Korea currently and justify their classification.
3. In small groups, analyze where Korea fits according to Wallerstein’s World Systems Theory and justify their classification.
4. Discuss #3 and #4 as a whole class.

*Recommended assessment- Use the 2014 AP Human Geography FRQ #1* [*https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap14\_frq\_Human\_Geography.pdf*](https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap14_frq_Human_Geography.pdf) *, but substitute Korea for Mexico or Brazil.*

Extension Resources for Activity 5:

South Korea’s Economy: What do you do when you reach the top? <http://www.economist.com/node/21538104>

Secrets Behind Korea’s Economic Success (24:14)- <https://www.youtube.com/watch?v=IQARiOFLBCo>

Korea’s Economic Development: Lessons and Suggestions for Developing Countries

<http://www.kossrec.org/wp-content/uploads/2015/04/KSSJ_200806_2_%EC%9C%A0%EC%9D%BC%ED%98%B8.pdf>

The German Economic Miracle (students could compare the development of Germany and Korea) <http://www.econlib.org/library/Enc/GermanEconomicMiracle.html>