The Human Development Index
from the Esri GeoInquiries™ collection for Human Geography

Audience – Human geography	Time required – 15 minutes

Activity	Explore the spatial patterns of the Human Development Index (HDI) to identify regional patterns and causal factors in the data.
APHG Benchmarks	**APHG: VI:B2 Analyze spatial patterns of social and economic development – GNI per capita.** **APHG: VI:B1 Explain social and economic measures of development – HDI, Gender Inequality Index (GII), Total Fertility Rate (TRF).** **APHG: VI:B6 Social and economic measures of development — Changes in fertility and mortality**
Learning Outcomes	• Students will analyze and use development statistics to identify and explain correlations between development and other APHG topics (for example, fertility and mortality).

Map URL: http://esriurl.com/humanGeoInquiry12

❓ Ask

What is development?

- – "Development" is a complicated word.
- ? What are some characteristics of a developed or less developed society?
- → Click the link above to launch the map.
- ? The UN creates an index from health, education, and wealth indicators to assess a country's level of development.
- ? What statistics do you think could be used as indicators? *[Health: life expectancy; education: years of schooling; wealth: per capita income.]*

⬇ Acquire

How does development compare around the world?

- → Click on the United States and examine the pop-up. Repeat for Brazil and Pakistan.
- ? How does the index vary for these countries? *[The United States has the highest 2017 HDI (0.92), Brazil has an HDI of 0.75, and Pakistan has an HDI of 0.56.]*
- ? Which regions are the most and least developed in the world? *[The most developed regions are Europe and North America, whereas the least developed are Africa and Southeast Asia.]*

🔍 Explore

How does crime affect development?

- → With the Details button underlined, click the button, Show Contents of Map (Content).
- → Uncheck the box to the left of the layer name, Human Development Index, 2017.
- → Turn on the layer, Murder Rates per 100,000.
- → Click the button, Bookmarks. Select Central America.
- ? Which country has the highest 2015 murder rate? *[El Salvador]*
- ? What correlation is there between development and crime? *[A higher murder rate correlates with lower development index scores.]*

more ▶

🖥 Analyze

What effect does birth rate have on development?

→ Show only the layer, Total Fertility Rate.
→ Filter the data to find regions with the highest fertility rates. (See Filter Tooltip below.)"
→ From the Contents pane, click the button, Filter.
→ Build this query: Total Fertility Rate 2016 Is Greater Than 3 (value).
? How does this statistic correlate with development? *[Higher fertility rates correlate with lower levels of development.]*
→ Turn off the layer, Total Fertility Rate.

✅ Act

How does gender inequality affect development?

→ Turn on the two layers: Gender Inequality Index and the GNI Per Capita.
→ Compare the two layers by turning them on and off.
? What is the general relationship between these two layers? *[Wealthier countries have less gender inequality.]*
→ Explore the regions of the world, visually.
? Is there a region that has very high per capita income but also experiences high levels of gender inequality? *[The Middle East, and the Persian Gulf oil states more specifically.]*
? How do income and gender inequality affect a country's HDI ranking? *[Income raises the rank, but gender inequality lowers the rank of human development.]*

FILTER	TABLE SORT
• Filter is only available for certain map layers. • In the Content pane, hover over the map layer name. • Under the map layer name, click the button, Filter. • Set the filter parameters. • Be sure to press the apply button.	• Filter is only available for certain map layers. • In the Content pane, hover over the map layer name. • Under the map layer name, click the button, Show Table. • Click the field name (column header). • Choose Sort Ascending or Descending.

Next Steps

DID YOU KNOW? ArcGIS Online is a mapping platform freely available to public, private, and home schools. A school subscription provides additional security, privacy, and content features. Learn more about ArcGIS Online and how to get a school subscription at http://www.esri.com/schools.

THEN TRY THIS...
• Use Enrich Data (in the Analysis tools) to add additional demographic, population, or economic data to the existing HDI dataset for targeted geographies.
• Create a story map using demographic data to highlight the metrics that are a part of the HDI composite statistic.

🗔 TEXT REFERENCES

This GIS map has been cross-referenced to material in sections of chapters from these texts.

• *Human Geography: A Short Introduction by Oxford University Press – Chapter 10*

• *The Cultural Landscape by Pearson – Chapter 9*