

URL: http://esriurl.com/humanGeoInquiry10

**APHG: I.B2. Students will analyze landscapes to understand human-environment relationships.
APHG: 5.A1. Students will investigate the connections between agricultural practices and the alteration of the natural environment.**

• Students will identify differences in the distribution of arable land on a global scale.

• Students will use imagery to analyze differences in rural land use and the alteration of the natural environment.

**Where are the world’s agricultural lands located?**

➙Click the map URL above to start the map.

 **?** What does arable mean? *[able to be farmed]*

*➙*Click on a country to reveal its pop-up.

**?**Using the World Agricultural Lands legend, which countries have over 60% arable land? *[Kazakhstan,*

*Mongolia, India, Ukraine, Saudi Arabia]*

**?**Which country’s data are surprising? *[Saudi Arabia]*

**?**How does Saudi Arabia increase its agricultural land? *[irrigating desert areas]*

**?**Which large countries have under 15% arable land? *[Russia, Canada, Libya, Egypt etc.]*

**?**Why do Russia and Canada have low percentages? *[Climate is not suitable for agriculture.]*

**Where are agricultural lands in the United States?**

**?**What is the percent of agricultural land in the United States? *[44.32]*

**?**How has that percentage changed over time? *[declined]*

➙With the Details button underlined, click the button, Show Contents of Map (Content).

➙Check the box to the left of layer name, USA Land Cover (2011). Click the layer’s name to see the legend.

➙Uncheck the layer, World Agricultural Lands.

**?** Which colors indicate farming? *[brown, cultivated crops; yellow hay/pasture]*

➙Click the button, Bookmarks. Select United States.
**?** Where are large areas of farms located? *[Midwest and California]*

**How do rural landscapes within the United States differ?**

➙Click the button, Basemap. Select Imagery.

➙Turn on the layer, USA Land Cover (2011).

➙Click the button, Bookmarks. Select Kansas.

**?** What patterns do you observe? *[square crop areas; circular irrigation]*

➙Toggle between the land cover and image layers.

**?**Does the landcover map confirm agricultural land use? *[yes]*

**?**What new crop category appears? *[herbaceous]*

**?**What do you observe? *[crop lands in long rectangular shapes]*

**?**What other landcover category is in this area? *[woody wetlands]*

**How does land use differ between rural and urban areas?**

The Great Dismal Swamp National Wildlife Refuge protects 112,000 acres of forested wetlands.

➙Click the button, Bookmarks. Select Dismal Swamp 1.
**?** What do you observe? *[a lake in the middle; large green area surrounded by patches of farms]*

➙Click the button, Bookmarks. Select Dismal Swamp 2.

➙Zoom and pan the map.

**?** What do you see? *[farmland almost within the park, ditches, highway, strip of houses]* ʅ Click the button, Bookmarks. Select Chesapeake.

**?** What do you observe? *[urban settlement bordering rural areas]*

**How has human action affected rural areas?**

**?**How has irrigation affected rural areas? *[more land cultivated, pressure on water resources]*

**?**What are some possible negative aspects of the expansion of agriculture? *[soil depletion, deforestation,*

*desertification, loss of wetlands]*

**?**How are cities changing rural areas? *[reduced farmland due to spread of housing developments, expanding of transportation networks]*

ʅ Click the button, Bookmarks. Select Louisiana. more