



A Line in the Sand

from the Esri GeoInquiries™ collection for World Geography

Target audience – World geography learners

Time required – 15 minutes

Activity	Explore the cultural attributes of the Arabian Peninsula and country boundary constructs.
Social studies standards	C3:D2.D2.Geo.10.6-8. Analyze the ways in which cultural and environmental characteristics vary among various regions of the world. C3:D2.Geo.8.6-8. Analyze how relationships between humans and environments extend or contract spatial patterns of settlement and movement.
Learning Outcomes	<ul style="list-style-type: none">• Define and describe the Empty Quarter.• Explain major elements of the Treaty of Jeddah boundary agreement between Saudi Arabia and Yemen.• Identify physical and cultural characteristics of the Arabian Peninsula that are reflected in the new Saudi–Yemeni border agreement.

Map URL: <http://esriurl.com/worldGeoInquiry8>

? Ask

Where is the Arabian Peninsula located?

- Click the link above to launch the map.
- With the Details button underlined, click the button, Show Contents.
- On the map, click the Arabian Peninsula outline. Read the pop-up.
- ? Which countries form borders with the Arabian Peninsula? [*Kuwait, Iraq, and Jordan*]

! Acquire

What are the population characteristics of the Arabian Peninsula?

- Check the box to the left of the layer name, Agriculture.
- Click on the layer name to see a legend.
- ? What is the principal agricultural activity on the peninsula? [*Nomadic herding*]
- ? Why is agricultural activity so limited? [*Lack of sufficient water for farming*]
- Turn off the Agriculture layer, and then turn on the Population Density layer and view its legend.
- ? What is the overall population density of the Arabian Peninsula? [*Most of the Arabian Peninsula has fewer than 25 people per km², and at least half of that area includes fewer than 1 person per km².*]
- Turn off the Population Density layer and turn on the Agriculture and Springs layers.
- ? Speculate about the ways that water is most commonly used at these springs. [*One conclusion is that most the springs are used to water livestock.*]

🔍 Explore

What is the Empty Quarter?

- Turn off the layer, Springs. Turn on the layer, Roads 2001; view its legend.
- View the large area with few roads in the south-central part of the peninsula. This is called the Rub 'al-Khali or the Empty Quarter.
- Turn the following layers on and off so that you can observe the characteristics of the Empty Quarter: Springs, Population Density, Agriculture, Temperature, and Annual Precipitation.
- ? What do you observe about the physical and population characteristics of the Empty Quarter? [*It is a desert region with no permanent bodies of water and less than 3 inches of rainfall per year. There is no agricultural activity and it is uninhabited.*]

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Analyze

What complicated the agreement on the border of Yemen and Saudi Arabia?

- Turn on the three layers, Yemen Boundary 1, 2, and 3 Click each line and read the text.
- ? What does the area between the blue and purple lines represent? *[It is claimed by both Saudi Arabia and Yemen, and therefore was disputed territory.]*
- Turn on the layer, Agriculture; view its legend.
- ? What is the principal economic activity of the regions in dispute? *[Nomadic herding]*
- Turn off the layer, Agriculture. Turn on the layer, Population Density. View the legend.
- ? Describe the population distribution in the disputed territory. *[It is mostly uninhabited with the western part of the territory being the only area of higher concentration of people.]*

Act

What does the final Saudi–Yemeni Border look like?

- Zoom to the Yemen bookmark (see the ToolTip below for details).
- Turn on two layers, Cities and Towns and Yemen Final Border.
- Click the border and read the pop-up information.
- ? Does the final border go through any cities or towns? (You may need to zoom in again.) If so, how many towns? *[The boundary passes through fewer than 10 villages but within a mile or two of many more.]*
- ? What are some observations about the boundary created by the Treaty of Jeddah? *[Possible answers: New boundary increased Yemen's territory; most of Yemen's new territory is land used by nomadic herders and desert; most of the new territory is uninhabited or very sparsely settled.]*

ZOOM TO A BOOKMARK

- Click Bookmarks.
- Click a bookmark name to zoom to a map location and scale.

TURN A MAP LAYER ON AND OFF

- Make sure that the Details pane is selected, and click Contents.
- To show individual map layers, select the check boxes next to the layer names.
- Hint: If a map layer name is light gray, zoom in or out on the map until the layer name is black. The layer can now be turned on.

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...**

- Click the Elevation Tinted Hillshade layer, and then click the More Options button (three dots) and choose Transparency.
- Adjust transparency until you can see the country boundaries.
- Evaluate which countries have mountains and where they are in relation to country borders.

TEXT REFERENCES

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

- *World Cultures and Geography* by McDougal Littell
- *My World Geography* by Pearson