

LEVEL
2

The Costs of Punishment

from the Esri GeoInquiries™ collection for Government

Target audience – Government learners

Time required – 15 minutes

Activity	Examine the relationship between inmate numbers and the costs of imprisonment.
Social Studies Standards	C3:D2.Civ.14.9-12. Analyze historical, contemporary, and emerging means of changing societies, promoting the common good. C3:D2.Civ.11.9-12. Evaluate multiple procedures for making governmental decisions at the local, state, national, and international levels in terms of the civic purposes achieved.
Learning Outcomes	<ul style="list-style-type: none">Students will compare the number of state prisons in their home and neighboring states.Students will analyze the relationship between the number of inmates and costs for prisons.
Level 2 GeoInquiry Requirements	<ul style="list-style-type: none">A free school ArcGIS Online organization account. Instructors or students must be signed in to the account to complete this activity.Approximately 1.5 credits will be used per person in the completion of this activity as scripted.

Map URL: <http://esriurl.com/govGeoInquiry10>

Ask

Where are state prisons concentrated?

- Click the link above to launch the map.
- In the upper-right corner, click Sign In and use your ArcGIS Online organization account to sign in.
- With the Details button underlined, click the button Show Contents of Map (Content).
- Turn off all layers.
- Turn on the two layers, State Prisons and States.
- Which purposes of government do prisons fulfill? [*They maintain social order and provide public goods.*]
- How are the prisons distributed? [*Along the East and Gulf coasts*]
 - There are approximately 1,329 state prisons in the U.S.

Acquire

How many prisons are in each state?

- Click the button, Bookmarks. Select Contiguous U.S.
- See the Summarize Within ToolTip on page 2.
- Click the button, Analysis. Expand Summarize Data and choose Summarize Within.
- In the Summarize Within tool, set the following parameters.
 - From the drop-down list, choose States.
 - From the drop-down list, choose State Prisons.
 - Update the layer name to include _<your initials _date> at the end of it. Leave Use Current Map Extent selected so that you only compute the states in the map view that you previously set.
 - Always click Show Credits to ensure acceptable credit usage.
 - Click Run Analysis.

Explore

How does the number of prisons vary from state to state?

- What is the result? [*Graduated symbols, one per state*]
- Turn off the layer, State Prisons.
- View the legend for the layer that you created.
- What is the range in the number of prisons? [*From 1 to 120*]
- Open the layer's table, and then Sort Descending. (See ToolTip on page 2.)
- Which states have more than 100 prisons? [*Texas and Florida*]

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Analyze

How does spending on prisons vary from state to state?

- Turn on the layer, Prison Costs.
- ? Which three states spend the most? [California, Texas, and New York]
- Examine the pop-ups for those three states.
- ? Which of those states spends the most per inmate? [California]
- ? Of those three states, does California have the most prisoners? [No, Texas does]
- Open the table, and sort the costs_inmate column in descending order.
- ? Which states spend over \$100,000 per inmate? [Alaska, Rhode Island, North Dakota, and Vermont]
- ? Why might those states have higher costs? [Few inmates or higher costs]



Act

How does your state compare?

- Zoom to your state, and view the pop-ups for both layers (Prison Costs and your analysis layer).
- ? How many prisons does your state have? [Answers will vary.]
- ? What is the average cost per inmate? [Answers will vary.]
- ? How does spending in your state compare to neighboring states? [Answers will vary.]

VIEW AND SORT A TABLE

- Tables are only available for certain map layers.
- With the Details button underlined, click the button Show Contents of Map.
- Hover over a layer name and click the Show Table button that appears.
- Click the field name and choose Sort Ascending or Sort Descending.

SUMMARIZE WITHIN

- This tool finds features (and portions of features) that are within the boundaries of areas in the first input layer.
- This tool is typically used to create summary statistics on points that lie within a selected area (polygon).
- Be sure to name the new layer with a unique file name otherwise the analysis will not proceed. A date and initials appended to the recommended name typically suffice.

Next Steps

Continue using an ArcGIS Online organizational account (www.esri.com/schools) to dig deeper into data using the analysis tools, and save your maps to your account.

THEN TRY THIS...

- Use the Summarize Within tool for local and federal correctional institutions within each state.
- Calculate the density of prisons within the United States.
- Use buffers and overlay to identify the prisons within a set distance of an interstate highway.



TEXT REFERENCES

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

- Magruder's American Government by Pearson — Chapter 7
- Civics and Economics by Holt — Chapter 16
- Government Alive! Power, Politics, and You by Teachers' Curriculum Institute — Chapter 16