



AMERICAN
LITERATURE

Hiroshima

from the Esri GeoInquiries™ collection for American Literature

Target audience – American literature learners

Time required – 15 minutes

Activity

Learn about the Hiroshima explosion and how the height of the explosion and its effects are linked. Book: *Hiroshima* by John Hersey

Standards

CCSS: ELA-LITERACY.RL.9-10.6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.

CCSS: ELA-LITERACY.RI.9-10.7. Analyze various accounts of a subject told in different mediums (for example, a person's life story in both print and multimedia), determining which details are emphasized in each account.

Learning Outcomes

- Students will analyze the effects of the explosion on buildings and people.
- Students will analyze the effects of the explosion on the environment.

Map URL: <http://esriurl.com/litGeoInquiry11>

? Ask

What started the fight?

- December 7, 1941, is “a date which will live in infamy.”
- Click the link above to launch the map.
- Click the button, Bookmarks. Select Pearl Harbor.
- Read aloud: “You can see the first two waves of bombing attacks.”
- Click the bookmark, Distance To Japan.
- Click the button, Measure. Set to distance. Set units of miles. *[See the Use the Measure Tool tip on page 2 for details.] [Approximately 4,200 miles]*
- ? Why does the measure line curve? *[It mimics the curve of the earth.]*

↓ Acquire

Where did the bomb testing begin?

- Read aloud: “The U.S. began to plan strategies against Japan.”
- Click the bookmark, Nuclear Age Begins.
- Click the button, Basemap. Choose Imagery.
- Click the Trinity site dot and read the summary aloud.
- ? Why did this place make a perfect spot to test a bomb? *[Desert terrain and no population]*

🔍 Explore

Why Hiroshima?

- Click the bookmark, Post Pearl Harbor Defense.
- Click the Play button (bottom of map) to see where the allied forces focused their efforts.
- ? What do you notice about the areas bombed? *[None are on Japan's main island of Honshu.]*
- With the Details button depressed, click the button, Content.
- Deselect the checkbox to the left of the layer name, Post Pearl Harbor Attack.

more ►

Analyze

How were structures affected?

- Read aloud: “We may assume that the most damage is done when a bomb detonates on the ground, but with a nuclear bomb, an air detonation is more destructive.”
- Select the bookmark, Ground Zero.
- Turn on the Hiroshima-Blast Effects layer to see the blast’s effects on structures when the bomb detonated at 580 meters (about 1,900 feet) above the city.
- In the Details pane, click the button, Show Map Legend. See the details of the rings.
- ? When you see the destructive force, why do you believe this attack put an end to the war? *[Answers will vary but may include: It was not a military installation. This was an urban, well-populated area.]*

Act

What happened to the people?

- Turn off the layer, Hiroshima – Blast Effects.
- Turn on the layer, Hiroshima Thermal Radiation Effects.
- Examine the thermal radiation effects.
- ? What seems different about the effect on people versus structures? *[The worst effects reach further from the center.]*
- Turn off the layer, Thermal Radiation Effects.
- Turn on the layers, 2km Detonation Blast Effects and Thermal Radiation Effects. Examine them.
- ? What is the difference in the blast and radiation effects if detonated at 2 kilometers (about 6,600 feet) instead of the 580 meters? *[The blast effect would be 10 times worse; radiation effects would be 20 times worse.]*

USE THE MEASURE TOOL

- Click Measure, select the Distance button, and from the drop-down list, choose a unit of measurement.
- On the map, click once to start the measurement, click again to change direction, and double-click to stop measuring.
- Hint: Position the area of interest on the map so that it is not obscured by the Measure window.

TURN A MAP LAYER ON AND OFF

- Make sure that the Details pane is selected, and click Show Contents Of Map.
- 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...

- Explore other statistics in the data tables and symbolize other factors.
- Explore the An Infamous Day story map at <http://esriurl.com/Geo41201>.

TEXT REFERENCES

This GIS map has been cross-referenced to material in the following novel.

- *Hiroshima* by John Hersey