

It's Just Water

El Yunque National Forest Quarter

Grades Seven and Eight



OBJECTIVE

The students will collect, analyze, display, and interpret rainfall data, using a box-and-whiskers plot.



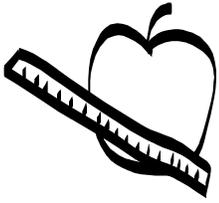
SUBJECT AREA CONNECTIONS

- Science
- Math
- Language Arts
- Social Studies



SUMMARY

1. Display and examine the “El Yunque National Forest Quarter” overhead transparency. Locate this site on a class map. Note its position in relation to your school’s location. As background information, explain to the students that the United States Mint began to issue the quarters in the America the Beautiful Quarters® Program in 2010. By the time the program ends in 2021, there will be a total of 56 designs on the back of the coin. Each design will focus on a different national site—one from each state, territory, and the District of Columbia.
2. Explain to the students that the El Yunque National Forest receives a lot of rain. Examine the average yearly rainfall data for the five national sites from the five quarters released in 2011. The following data was obtained from the national sites’ web sites:
 - Gettysburg National Military Park: 40 in.
 - Glacier National Park, MT: 11 in.
 - Olympic National Park, WA: 140 in.
 - Vicksburg National Military Park, MS: 52 in.
 - Chickasaw National Recreation Area, OK: 38 in.
3. With the students, calculate the mean, median, mode, and range for the rainfall data. As a class, create a box-and-whiskers plot for the data.
4. Invite the students to visit the web sites for the five America the Beautiful Quarters® to be released in 2012. Have them record the amount of average yearly rainfall each place receives on the “Rainfall Data” worksheet. Have the students find the mean, median, mode, and range for the 2012 set of rainfall data. The students will create a box-and-whiskers plot to show the information.



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5. Visit the El Yunque National Forest web site and have the students research why it receives so much rain. The students will summarize in one or two paragraphs the data, research, and identify the outliers and how they affect the data.



ASSESSMENT

Create a rubric that includes the categories of “math accuracy,” “content accuracy,” “graph accuracy,” “labeling of graph,” and “written data analysis.” Use the rubric to assess whether the student has met the lesson objectives.



RESOURCES

- “El Yunque National Forest Quarter” page
- “Rainfall Data” worksheet
- El Yunque National Forest: www.fs.usda.gov/wps/portal/fsinternet!/ut/p/c4/04_SB-8K8xLLM9MSSzPy8xBz9CP0os3gjAwhwtDDw9_AI8zPwhQoY6BdkOyoCAPkATIA!/?ss=110819&navtype=BROWSEBYSUBJECT&cid=FSE_003853&navid=0910000000000000&pnavid=null&position=BROWSEBYSUBJECT&ttype=main&pname=El Yunque National Forest-Home
- Acadia National Park: www.nps.gov/acad/index.htm
- Chaco Culture National Historical Park: www.nps.gov/chcu/index.htm
- Hawai’i Volcanoes National Park: www.nps.gov/havo/index.htm
- Denali National Park: www.nps.gov/dena/index.htm



Name _____

Rainfall Data



Directions: Visit the web sites for the following national sites and find the amount of average yearly rainfall they receive. Use your data to find the mean, median, mode, and range, and identify the outliers. Then use your data to create a box-and-whiskers plot.

NATIONAL SITE	LOCATION	AVERAGE YEARLY RAINFALL
El Yunque National Forest		
Hawai'i Volcanoes National Park		
Chaco Culture National Historical Park		
Acadia National Park		
Denali National Park		

Mean _____

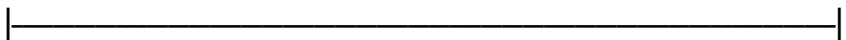
Median _____

Mode _____

Range _____

Outlier _____

Box-and-Whiskers Plot





El Yunque National Forest Quarter



The United States of America

