

MAP ACTIVITY

Reading a Topographic Map

Harrisburg, Pennsylvania, is located in an area of the Appalachian Mountain belt noted for its ridges and valleys. The Susquehanna River cuts through the ridges in the Harrisburg area severing once connected mountain ridges. The Harrisburg Topographic Map that you will use in this activity shows both a section of the river and several ridges. By studying this map, you will learn some fundamental aspects of map reading as well as some interesting features of this scenic area of the Appalachian Mountains.

Map Skills and Objectives

- To **identify** features on a topographic map
- To **interpret** contour lines to determine elevations
- To **evaluate** distance using a map scale

Materials

- Topographic Map: Harrisburg, PA, Appendix B, page 652
- Topographic Map Symbols, Appendix B, page 666
- magnifier (optional)

Procedure

1. Study the Harrisburg map and locate the following features: the Susquehanna River, Peters Mountain (only the letters PETE and the bottom of the letter R appear on the map), Third Mountain, Second Mountain, Cove Mountain, Blue Mountain east of the river, and Blue Mountain west of the river. Based on your observations, which of these mountain ridges appear to have been connected before the Susquehanna cut through them?
2. How does the spacing between contour lines on ridges differ from the spacing between contour lines in valleys? (A magnifier may help.) What does this spacing tell you about the steepness of the land in these areas?
3. The contour interval of the map is 20 feet. What is the elevation of the highest contour line shown on Cove Mountain? Second Mountain? Third Mountain?
4. Locate Fishing Creek on the west side of the Susquehanna River. Look closely at the contour lines along the creek. (A magnifier may help here, also.) How do the contour lines show that Fishing Creek flows into the Susquehanna River?
5. Locate the Rockville Bridge in the lower center of the map. How wide is the Susquehanna River at the Rockville Bridge? (Hint:

Lay the edge of your report sheet along the bridge and mark off both ends of the bridge. Use the map scale on page 650 like a ruler to measure the distance.)

6. Answer the questions in *Analysis and Conclusions*.

Analysis and Conclusions

1. How does color on the map distinguish ridges from valleys? What does this color difference indicate? What is the cause of this difference?
2. If you were standing on the contour line at the base of the Water Gap Observation Tower (upper shore of the Susquehanna River near the left edge of map), could you see the Rockville Bridge on a clear day? Could you see the village of Heckton (east side of the river near the middle of the map)? Explain.
3. (a) Locate the highway that crosses Peters Mountain. Why does the highway jog to the east (toward the Airway Beacon) instead of going straight over the mountain? (b) What is the straight line distance, in miles, between the point where the highway crosses Clark Creek and the point where it crosses the Appalachian Trail near the beacon? (Hint: Use the edge of your report sheet as in Procedure step 5.) (c) What is the distance along the highway between these same two points? (Hint: Move the edge of your report sheet along the highway.)

Key to Topographic Map Symbols

Primary highway, hard surface		Boundary: national	
Secondary highway, hard surface		State	
Light-duty road, hard or improved surface...		county, parish, municipio	
Unimproved road		civil township, precinct, town, barrio	
Trail		incorporated city, village, town, hamlet	
Railroad: single track		reservation, national or state	
Railroad: multiple track		small park, cemetery, airport, etc.	
Bridge		land grant	
Drawbridge		Township or range line, U.S. land survey	
Tunnel		Section line, U.S. land survey	
Footbridge		Township line, not U.S. land survey	
Overpass—Underpass		Section line, not U.S. land survey	
Power transmission line with located tower ..		Fence line or field line	
Landmark line (labeled as to type).....		Section corner: found—indicated.....	
		Boundary monument: land grant—other ...	
Dam with lock		Index contour	
Canal with lock		Supplementary cont	
Large dam.....		Cut—Fill	
Small dam: masonry—earth.....		Mine dump	
Buildings (dwelling, place of employment, etc.)		Dune area	
School—Church—Cemeteries.....		Sand area	
Buildings (barn, warehouse, etc.).....			
Tanks; oil, water, etc. (labeled only if water)...		Glacier	
Wells other than water (labeled as to type)...		Seasonal streams	
U.S. mineral or location monument—Prospect...		Water well—Spring	
Quarry—Gravel pit		Rapids.....	
Mine shaft—Tunnel or cave entrance.....		Channel	
Campsite—Picnic area.....		Sounding—Depth curve ..	
Located or landmark object—Windmill.....		Dry lake bed ...	
Exposed wreck.....			
Rock or coral reef.....		Woodland.....	
Foreshore flat		Submerged marsh	
Rock: bare or awash.....		Orchard	
		Vineyard.....	
		Areas revised since previous edition	
Benchmarks.....		Mangrove.....	
Road fork—Section corner with elevation ...		Scrub	
Checked spot elevation		Wooded marsh	
Unchecked spot elevation.....		Many buildings	

