



CHAPTER *Geography in History*

19



Pittsburgh: A Steelmaking Capital

In the mid-1800s, iron was the most popular metal used by industry. Although stronger than most metals, it was not strong enough to construct the tools, machines, and most of all the railroad tracks needed by the industrializing nation. American industry needed steel.

Steel had many uses. Barbed wire made from steel turned the range into farmland. In the early 1900s, architects built the frameworks for Chicago's first skyscrapers with steel. But the greatest source of demand for steel was the railroads. Rapid expansion of midwestern and western railroads spurred the demand for steel. Steel rails linked the Central Pacific and Union Pacific to create the nation's first transcontinental railroad. Midwesterners demands for locomotives, bridges, and farm machinery fueled the industry's growth as well.

A TRIANGLE OF NATURAL RESOURCES

Pittsburgh became the steel capital of the United States due to its location in the middle of a triangle of resources needed to make steel. Minnesota's Mesabi Range provided high-quality iron ore, as did iron deposits in northern Michigan and Wisconsin. Limestone deposits throughout New York, Pennsylvania, Indiana, and Michigan added a second ingredient needed to make steel. Limestone is added to iron ore in a blast furnace to absorb impurities.

Coal fields in the Appalachians of Pennsylvania, West Virginia, and Kentucky offered the other critical resource—coke—which is made from heated coal. Coke helps turn iron ore into pig iron, from which steel is made.

Nearness to natural resources would not have helped Pittsburgh much if it had been hard to transport these raw materials to the city. The region in which Pittsburgh is located is laced with natural waterways—from the Ohio River to the Great Lakes. The city itself sits at the point where the Allegheny and the

Monongahela rivers meet to form the Ohio River.

Waterways provided affordable transportation to Pittsburgh. Railroads became the major means of cross-country transport for commerce, but waterways continued to be the cheapest way to move heavy, bulky raw materials like coal and iron to steelmaking centers.

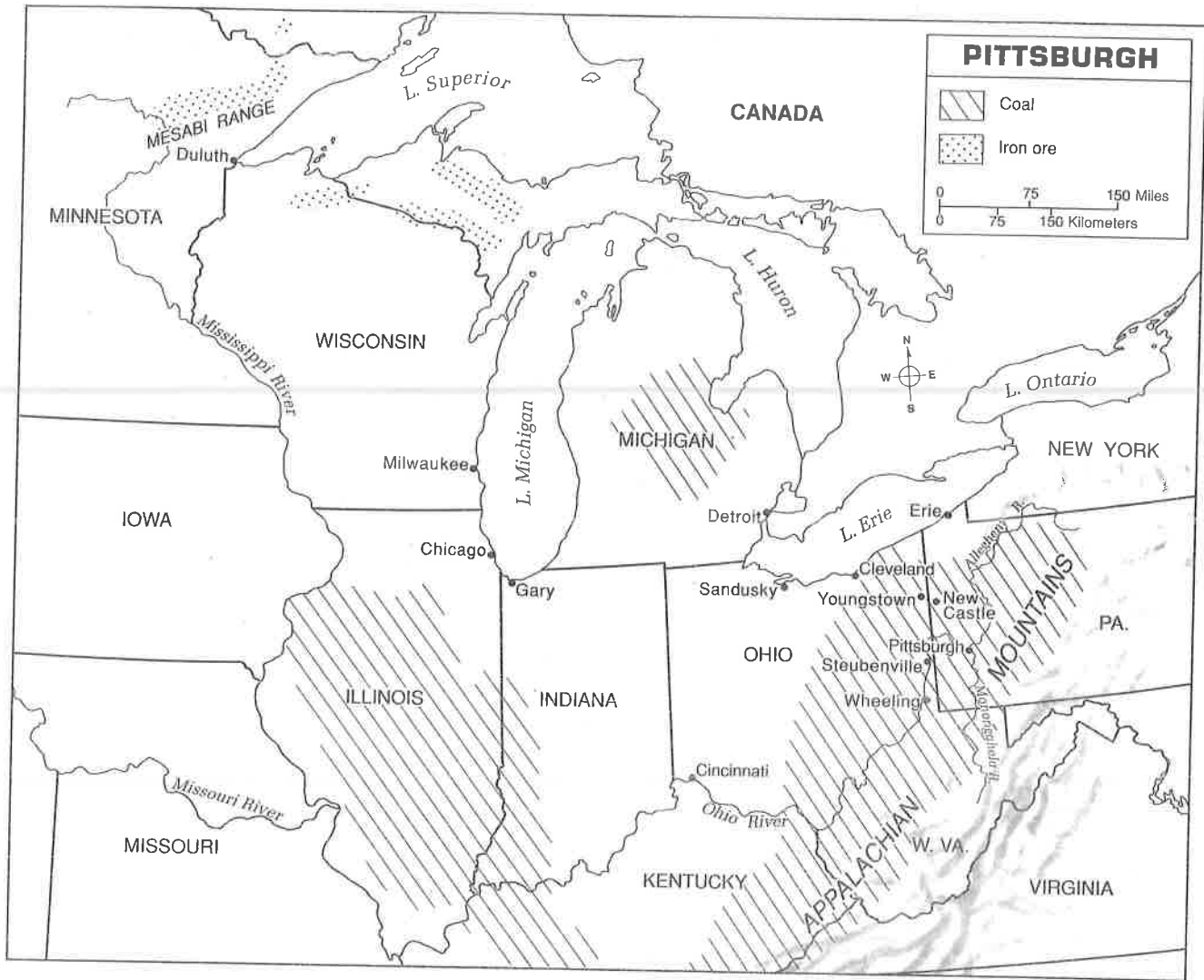
Iron ore traveled by way of Lake Superior to the southern shores of Lake Michigan and Lake Erie. From there it traveled by canal or railroad to various steel centers, including Pittsburgh. Coal went north by barge or flatboat upstream on the Monongahela River.

THE STEEL KING

American businessman Andrew Carnegie also contributed to making Pittsburgh the nation's steel city. Carnegie saw the Bessemer process in use in England. Recognizing the soaring need for steel in the United States, he built his first factory near Pittsburgh in 1873. It became the largest and most modern steel mill of its time.

By 1901, 34 iron and steel plants lined Pittsburgh's rivers. The largest was still Carnegie's former firm, now called U.S. Steel, after Carnegie sold out and retired from business.

Cities near Pittsburgh also benefited from the steel industry. Manufacturers built their factories near the source of steel rather than pay to ship steel long distances. Towns such as Wheeling, West Virginia, and Steubenville, Ohio, grew into industrial cities as factories dependent on steel crowded onto the Ohio River to be near Pittsburgh. Cities to the north of Pittsburgh—from Cleveland and Youngstown in Ohio to New Castle in Pennsylvania—benefited from their nearness to the nation's steel capital. Factories sprang up, where workers made machine parts, farm tools such as plows, and heavy machinery out of steel.



1. How far is it from Sandusky to Chicago?
2. What state had coal & iron ore?
3. Carnegie Steel became known as _____.
4. What mineral helps turn iron ore into pig iron?
5. What 3 river join at Pittsburgh?
6. What was the greatest demand for steel?
7. Name 3 cities on Lake Erie.
8. Where was limestone found?