Machines Make Cities

Trace how new technology changed Northern towns.

8.C.10.1.A "Describe major technological improvements and inventions that contributed to industrial growth in the North, resulting in heavily populated manufacturing and transportation centers."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline at least four technologies in the passage. For each one, circle a nearby phrase that shows how it helped factories, transportation, or a town grow.

How Northern Towns Grew

1 In the early 1800s, many Northern towns were small, but new machines changed the scale of work. In Lowell, Massachusetts, water from the Merrimack River powered textile mills where machines spun thread and wove cloth much faster than workers could at home. Later, steam engines let some factories run without depending entirely on a river's flow. As mills grew, owners hired more workers, including young women from farms and, later, immigrants. Housing, shops, and services crowded around the mills, turning Lowell into a busy manufacturing center.

2 Factories needed raw materials delivered and finished goods shipped. The Erie Canal, opened in 1825, linked the Hudson River to Lake Erie, giving New York City a cheaper water route to the Great Lakes region. Steam-powered boats moved cargo along rivers and canals, while growing railroad networks carried freight and passengers over land. Railroads could serve towns far from navigable water and operate in more seasons than canals. Places where routes met attracted warehouses, repair shops, and jobs. New York City grew as a major port and transportation center.

3 Communication and precision tools also helped Northern industry expand. The electric telegraph sent messages over wires in minutes, allowing merchants to coordinate orders and shipments across long distances. Machine tools helped factories make parts in standard sizes, so workers could assemble products and replace broken pieces more easily. Sewing machines sped up the stitching of clothing and other goods, helping garment makers produce more. These improvements did not build cities by themselves: jobs and transport links drew people to places where factories, markets, and routes came together.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did water-powered textile machines help Lowell become a manufacturing center with more residents?

2. How did the Erie Canal help New York City grow as a transportation center?

3. Why could railroads help towns far from navigable water grow?

4. How could the telegraph and machine tools help a Northern factory expand its business?

3 YOUR TURN

Your own words

Imagine you advise a Northern town in the 1850s that has a river landing and a small workshop. In exactly four sentences, propose a plan using two technologies from the passage, explain how each would help the town, and predict why more people might settle there.

ANSWER KEY

Machines Make Cities

GRADE 8 · 8.C.10.1.A

PART 1 · READ AND MARK

Underline at least four technologies in the passage. For each one, circle a nearby phrase that shows how it helped factories, transportation, or a town grow. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did water-powered textile machines help Lowell become a manufacturing center with more residents?	**The machines made cloth faster than home workers could. Growing mills hired workers, and housing and businesses gathered around them.**
2	How did the Erie Canal help New York City grow as a transportation center?	**It gave the city a cheaper water route to the Great Lakes region, helping goods move through its port.**
3	Why could railroads help towns far from navigable water grow?	**Railroads carried freight and passengers over land. Towns on their routes could attract warehouses, repair shops, and jobs.**
4	How could the telegraph and machine tools help a Northern factory expand its business?	**The telegraph helped merchants coordinate orders and shipments quickly. Machine tools made standard-sized parts easier to assemble and replace.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Our town should add sewing machines to its workshop so workers can stitch clothing faster. Steam-powered boats could bring cloth to the river landing and carry finished clothes to markets. Faster production and shipping could create jobs in the workshop and at the landing. Workers might move here, leading to more homes and stores near the river.

Accept other accurate links between a named technology and industrial or transportation growth. For Part 3, look for exactly four sentences, two technologies, a clear benefit from each, and a plausible reason for population growth.